Salaries

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Analysis of the
American Chemical Society's
1989 Survey of Salaries and Employment

American Chemical Society
Washington, D.C.

A1250-4

SALARIES 1989

ANALYSIS OF THE AMERICAN CHEMICAL SOCIETY'S 1989 SURVEY OF SALARIES AND EMPLOYMENT

American Chemical Society
1155 Sixteenth Street, N.W.
Washington, D.C. 20036

July 1989

Available from the Distribution Office, ACS

ISBN 0-8412-1680-0

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CONTENTS

	Page
Acknowledgements	iv
Summary and Comment	1
A Method for Estimating Average Salaries	7
List of Tables	11
Technical Notes	15
Geographic Regions	18
Tables	19
Survey Questionnaire	125

ACKNOWLEDGEMENTS

This report presents detailed results of the 1989 ACS Salary and Employment Status Survey. A summary of the survey findings was published in the July 3, 1989 issue of *Chemical and Engineering News*.

General oversight of the survey and its analysis was provided by the ACS joint Board-Council Committee on Economic Status, headed by John Connolly[1], and by its subcommittee on surveys, chaired by Jack G. Kay[2]. The committee expresses its gratitude to the approximately 12,000 ACS members who provided a valuable service to the profession by completing the survey questionnaire.

Joan Burrelli, Seryu Patel, and Patricia Rook of ACS Market and Business Analysis prepared this report. Dr. Burrelli wrote the summary and comment on the following pages.

Robert K. Neuman, Special Assistant
to the Director, Membership Division

---

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[2]Dr. Jack Kay, Department of Chemistry, Drexel University, Philadelphia, Pennsylvania.

SUMMARY AND COMMENT

Salaries

Chemical engineers' median salaries, for all degree levels, were relatively flat for the second year in a row. The overall median salary for PhD industrial chemical engineers was $64,700 compared with $62,900 last year, master's degree chemical engineers reported a median salary of $53,000 compared with $50,900 last year, and bachelor's degree chemical engineers' median salary was $47,700 both this year and last. Median salaries of new BS chemical engineers, however, have more than kept pace with inflation. The median salaries of BS chemical engineers with 0-1 and 2-4 years since the BS are 6% higher than those of last year.

Among chemists, overall median salaries showed modest increases over those of last year. As of March 1, 1989 median salaries for ACS member chemists were:

$52,500 for PhD, up 5% from 1988, unchanged in constant dollars
$43,000 for MS, up 5% from 1988, unchanged in constant dollars
$37,000 for BS, up 5% from 1988, unchanged in constant dollars

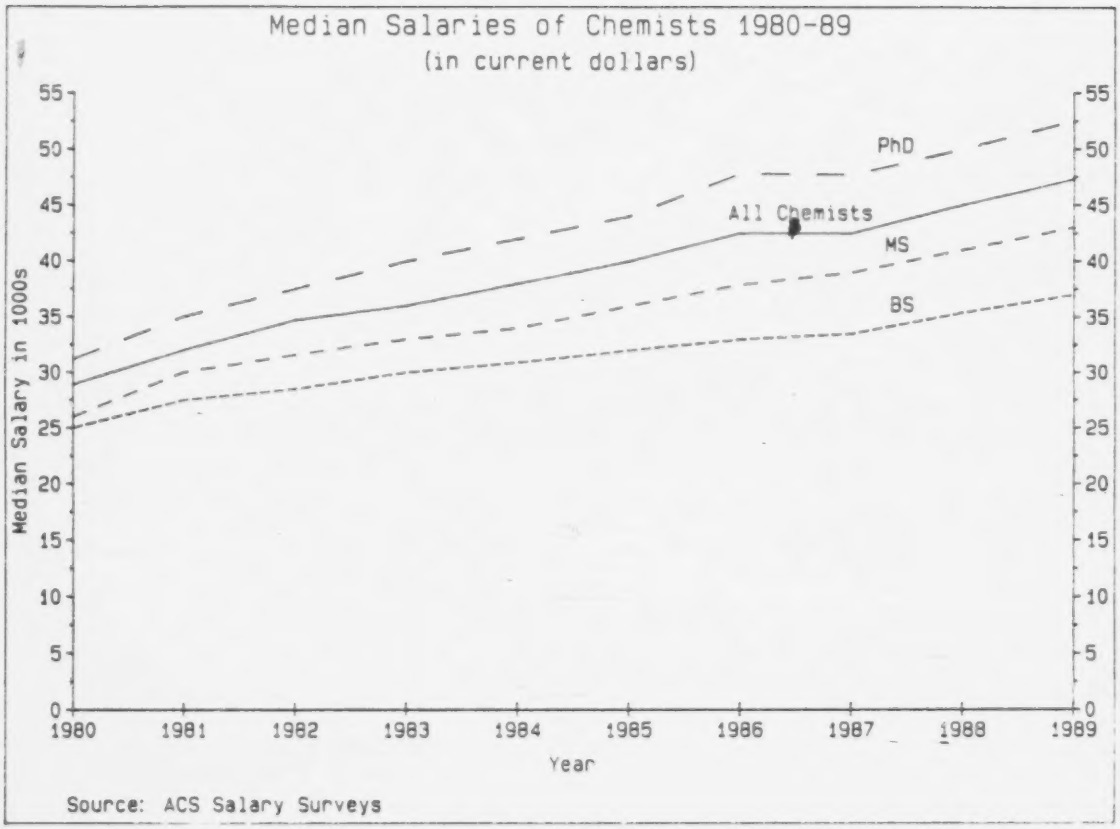
The Consumer Price Index rose 5.0% from March 1988 to March 1989.

With the exception of 1987, when salaries barely increased over those of the previous year, overall salaries for chemists have increased about six percent per year (in current dollars) since 1980. In constant dollars, median salaries of BS chemists have remained relatively unchanged and median salaries of PhD chemists have increased about 1% per year since 1980.

The median salary for PhD chemists employed in academia showed the largest increase (7%) this year over that of last year. The median salary for PhDs in industry rose 6% and the median salary for PhDs in government rose 5% this year. The median salary of PhD full professors employed in colleges or universities was $48,000 for those on 9 or 10 month contracts and $67,000 for those on 11 or 12 month contracts. PhD associate professors' median salaries were $35,800 and $48,500 respectively, and PhD assistant professors' median salaries were $30,000 and $38,800 respectively for those on 9 or 10 month and 11 or 12 month contracts. In 1989, median salaries in government were $53,400 for PhD chemists, $38,000 for master's degree chemists, and $35,000 for bachelor's degree chemists.

The greatest influences on nonacademic salaries are type of industry, work function, work specialty, length of experience, and degree of responsibility. Salaries for chemists employed in industry are generally higher for those working in the petroleum industry, those in management, chemists specializing in medicinal/pharmaceutical chemistry, chemists with greater experience, and chemists with greater responsibility.

Salaries also differ by geographic region. The median salary of PhDs in industry ranged from a high of $60,000 in the Pacific, West South Central, and Middle Atlantic regions to a low of $51,400 in the Mountain region. Regional differences in salaries are largely a function of differences in type of industry. The West South Central region, for example, has a high concentration of members employed in the petroleum industry, one of the highest paying industries. Within industries, salaries are fairly similar across regions. For example, among PhD chemists employed in the pharmaceutical industry with 10-14 years since the BS, the median salary for those in the East North Central region is $50,000 and the median salary for those in the Middle Atlantic region is $50,400.

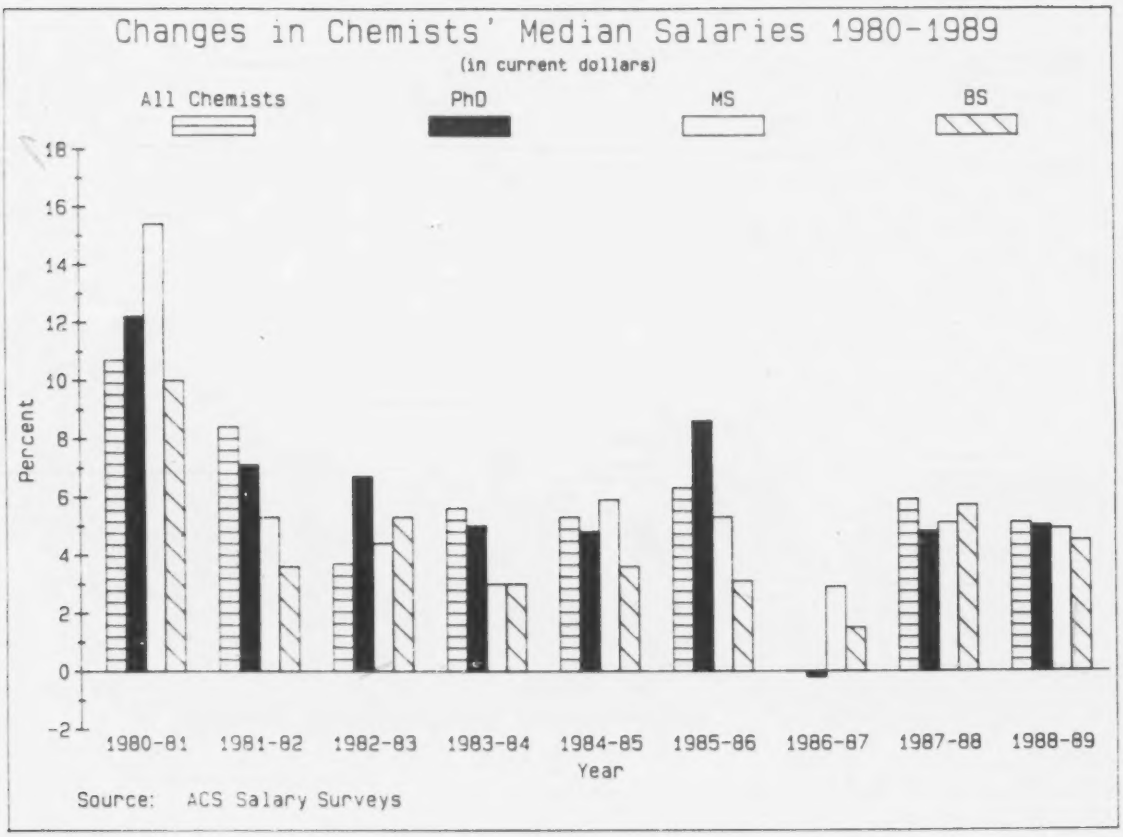


Chemists' Median Salaries*
(in current dollars)

Degree	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
B.S.	$25.0	$27.5	$28.5	$30.0	$30.9	$32.0	$33.0	$33.5	$35.4	$37.0
M.S.	26.0	30.0	31.6	33.0	34.0	36.0	37.9	39.0	41.0	43.0
Ph.D.	31.2	35.0	37.5	40.0	42.0	44.0	47.8	47.7	50.0	52.5
All Chemists	28.9	32.0	34.7	36.0	38.0	40.0	42.5	42.5	45.0	47.3

* Base annual salary on March 1 of the year (in thousands of dollars)

Source: ACS Salary Surveys



Changes in Chemists' Median Salaries* 1980-1989

Years	All Chemists % Change	PhD % Change	MS % Change	BS % Change
1980-1981	10.7	12.2	15.4	10.0
1981-1982	8.4	7.1	5.3	3.6
1982-1983	3.7	6.7	4.4	5.3
1983-1984	5.6	5.0	3.0	3.0
1984-1985	5.3	4.8	5.9	3.6
1985-1986	6.3	8.6	5.3	3.1
1986-1987	-	<-0.2>	2.9	1.5
1987-1988	5.9	4.8	5.1	5.7
1988-1989	5.1	5.0	4.9	4.5

* In current dollars

Source: Calculations based on ACS Salary Survey data

Salaries for women chemists are generally lower than those for men. The median salary for women PhDs in industry was 81% of that for men (unchanged from last year). The difference in men's and women's median salaries is partly due to differences in experience. When length of experience is taken into account, the salary gap narrows. For example, the median salary for women PhDs in industry with 15-19 years since the BS is virtually the same as that for men with comparable experience. The difference in men's and women's median salaries can also be explained by differences in work function and responsibility, e.g., men are more likely than women to be in management.

The greatest influences on academic salaries are academic rank, school type, and work function (e.g., teaching, administration). Academic salaries are generally higher for full professors, those in public institutions, those in departments granting PhD degrees, and those in research as opposed to teaching. Salaries of tenured faculty are somewhat higher than those of nontenured faculty. Within ranks, length of experience has little influence on salaries. The median salary for PhD associate professors with 10-14 years since the BS and on 9 or 10 month contracts is $37,000; that for those with 30-34 years since the BS is $38,000.

Salaries for women academic chemists are generally lower than those for men. The difference in men's and women's median salaries is partly due to differences in rank. Women chemists in academia are less likely than men chemists to be full professors. The median salaries of men and women chemists with comparable rank are more nearly equal. For example, the median salary of women PhD full professors on 9 or 10 month contracts is 90% that of men's.

Employment and Unemployment

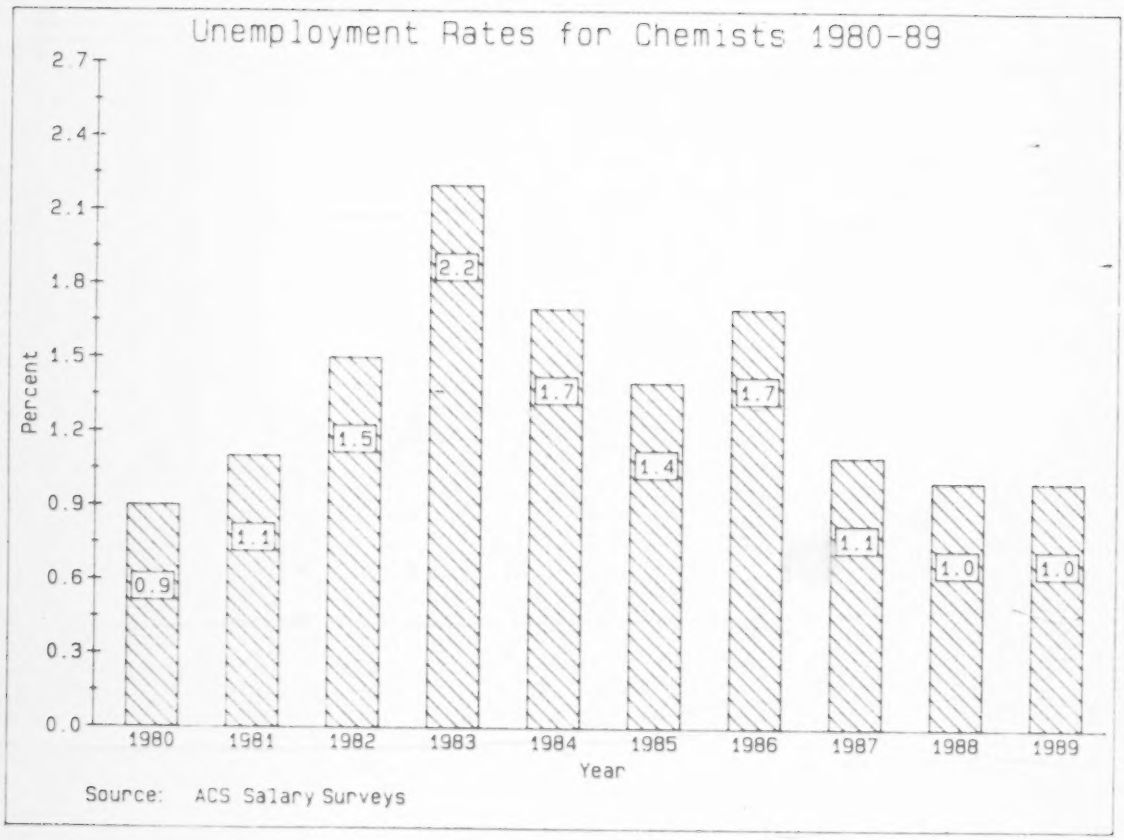
The overall unemployment rate among chemists in spring 1989 was 1.0%, the same as in 1988. The unemployment rates this year and last were the lowest since 1980. The overall unemployment rate among chemical engineers was 1.5%, slightly higher than last years' 1.3%.

In a departure from the previous two years, the percent of chemists experiencing extended periods of unemployment was up. In 1987 and 1988, 22% of those unemployed on March 1 had been unemployed for more than one year. This year, about 30% reported they had been unemployed for more than one year, the same as in 1986. More than half of these are over 50 years old.

Of chemists in the labor force at the time of the survey, 3% had been unemployed at some time during 1988. Almost 60% of these reported they were unemployed for three months or less in 1988.

Unemployment rates were higher for BS chemists, for "other nonacademic" chemists, and for either younger or older chemists. The unemployment rate for BS chemists was 1.5% compared to 0.8% for PhD chemists. Chemists in "other nonacademic" employment had a higher rate of unemployment (2.5%) than chemists in any other type of employment: 0.8% for academic chemists, 0.9% for government chemists, and 1.0% for industrial chemists. The unemployment rate differed little by sex or race. The unemployment rate for women was 1.0%, the same as that for men. Although women were no more likely than men to be unemployed, women chemists were three times as likely as men to work part-time (3.6% compared with 1.0%).

Further information about this survey may be obtained from Joan Burrelli (212)872-4433.


Unemployment Rates for Chemists 1980-89
Percent
2.7
2.4
2.1
1.8
1.5
1.2
0.9
0.6
0.3
0.0
0.9
1.1
1.5
2.2
1.7
1.4
1.7
1.1
1.0
1.0
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
Year
Source: ACS Salary Surveys

A METHOD FOR ESTIMATING AVERAGE SALARIES

A compact summary of the information in this report is possible through a statistical technique known as multiple regression. This technique identifies which characteristics have the greatest effect on salaries, and results in a formula for estimating the average salary of respondents with certain characteristics.

For industrial chemists and chemical engineers responding to the 1989 survey, the three characteristics which account for most of the variation among salaries are highest degree, experience (years since B.S. is used to measure experience in ACS surveys), and work function.

Table I displays the factors needed to estimate the average salary for any group of respondents who are industrial chemists with any combination of the listed characteristics.

For example, to estimate the average salary in March 1989 for industrial chemists with the doctorate, 15 to 19 years of experience, and working in R&D management, find the corresponding factors in Table I and multiply them together with the base salary for all industrial chemists:

($25,890) x (1.308) x (1.605) x (1.216) = $66,092

Table II displays the factors needed to estimate the average salary for chemical engineers. For example, to estimate the average salary in March 1989 for industrial chemical engineers with a master's degree, 15 to 19 years of experience, and working in R&D management, find the corresponding factors in Table II and multiply them together with the base salary for all industrial chemical engineers:

($28,501) x (1.080) x (1.565) x (1.220) = $58,770

For academic chemists responding to the 1989 survey, the characteristics which account for most of the variation among salaries are rank, academic work function, length of contract (9 or 10 month or 11 or 12 month), the highest degree offered by the respondent's department, and the control (public or private) of the respondent's institution.

Table III displays the factors needed to estimate the average salary for any group of respondents who are PhD academic chemists employed full-time in colleges or universities with any combination of the listed characteristics.

For example, to estimate the average salary in March 1989 for academic chemists at the rank of full professor, engaged primarily in research, on 11 or 12 month contracts, and employed in PhD-granting departments in public universities, find the corresponding factors in Table III and multiply them together with the base salary for all academic chemists:

($27,135) x (1.698) x (1.079) x (1.312) x (1.163) x (1.000) = $75,858

Averages estimated using this method should be interpreted with caution, for two reasons. First, and more important, is that the relationship between salary and employment characteristics is not exact. Variations due to employer (such as size of company and geographic location), or to individual differences (such as ability and number of people supervised), and other characteristics prohibit perfect estimation of an individual's salary. Secondly, the factors shown in the tables are estimates derived from a sample of chemists rather than the entire population of chemists, and as such are subject to the imprecision associated with sampling procedures.

Table I

SALARY FACTORS FOR INDUSTRIAL CHEMISTS

BASE SALARY	$25,890
DEGREE:	
Bachelor's	1.000
Master's	1.074
Doctorate	1.308
MATURITY:	
(Years Since Receiving B.S.)	
0-1	1.000
2-4	1.082
5-9	1.282
10-14	1.444
15-19	1.605
20-24	1.776
25-29	1.868
30-34	1.883
35-39	2.053
40 or more	1.964
WORK FUNCTION:	
Basic Research	1.000
R&D Management	1.216
Applied Research	0.988
General Management	1.178
Marketing	1.048
Production	0.942
Forensic/Lab Analysis	0.916
Chemistry Information Services	0.933
Data Processing	1.005
Consulting	1.060
Other	0.977

Table II

SALARY FACTORS FOR INDUSTRIAL CHEMICAL ENGINEERS

BASE SALARY	$28,501
DEGREE:	
Bachelor's	1.000
Master's	1.080
Doctorate	1.243
MATURITY:	
(Years Since Receiving B.S.)	
0-1	1.000
2-4	1.070
5-9	1.245
10-14	1.418
15-19	1.565
20-24	1.705
25-29	1.912
30-34	2.055
35-39	2.099
40 or more	1.869
WORK FUNCTION:	
Basic Research	1.000
R&D Management	1.220
Applied Research	1.021
General Management	1.474
Marketing	1.033
Production	0.971
Forensic/Lab Analysis	0.734
Chemistry Information Services	1.192
Data Processing	1.095
Consulting	1.061
Other	1.094

Table III

SALARY FACTORS FOR ACADEMIC CHEMISTS

BASE SALARY	$27,135
RANK:	
Professor	1.698
Associate Professor	1.247
Assistant Professor	1.000
Instructor/Lecturer	0.973
Non-faculty Research Associate	0.853
Unranked Faculty Member	1.145
WORK FUNCTION:	
Teaching	1.000
Research	1.079
Administration	1.093
LENGTH OF CONTRACT	
9 or 10 Month	1.000
11 or 12 Month	1.312
HIGHEST DEGREE OFFERED IN DEPARTMENT:	
Bachelor's or Master's	1.000
Doctorate	1.163
INSTITUTIONAL CONTROL:	
Public	1.000
Private	0.977

LIST OF TABLES

SALARIES ON MARCH 1, 1989

		Table Number	Page
ALL CHEMISTS			
Type of Employer	Years since the BS:		
	Bachelors	1.1.1	19
	Masters	1.1.2	20
	Doctorate	1.1.3	21
INDUSTRIAL CHEMISTS			
Highest Degree	Years since the BS:	2.1.1	22
	Men	2.1.2	23
	Women	2.1.3	24
Bachelor's Degree Holders			
Years since the B.S. and:			
Work Specialty		2.2.1	25
Work Function		2.2.2	27
Type of Industry		2.2.3	29
Geographic Region		2.2.4	31
Supervisory Status		2.2.5	33
Master's Degree Holders			
Years since the B.S. and:			
Work Specialty		2.3.1	34
Work Function		2.3.2	36
Type of Industry		2.3.3	37
Geographic Region		2.3.4	39
Supervisory Status		2.3.5	40
Ph.D. Degree Holders			
Years since the B.S. and:			
Work Specialty		2.4.1	41
Work Function		2.4.2	43
Type of Industry		2.4.3	46
Geographic Region		2.4.4	47
Supervisory Status		2.4.5	49

		Table Number	Page
GOVERNMENTAL CHEMISTS			
Highest Degree	Years since the BS	3.1.1	50
PhD ACADEMIC CHEMISTS in COLLEGES or UNIVERSITIES			
Academic Rank and Contract Status		4.1.1	51
Academic Rank and:			
Years since the B.S.	9 or 10 Month Contract	4.2.1	52
	11 or 12 Month Contract	4.2.2	53
Academic Work Function	9 or 10 Month Contract	4.3.1	54
	11 or 12 Month Contract	4.3.2	55
Work Specialty	9 or 10 Month Contract	4.4.1	56
	11 or 12 Month Contract	4.4.2	57
Tenure	9 or 10 Month Contract	4.5.1	58
	11 or 12 Month Contract	4.5.2	59
Institutional Control	9 or 10 Month Contract	4.6.1	60
	11 or 12 Month Contract	4.6.2	61
Type of Institution	9 or 10 Month Contract	4.7.1	62
	11 or 12 Month Contract	4.7.2	63
Sex	9 or 10 Month Contract	4.8.1	64
	11 or 12 Month Contract	4.8.2	65
Geographic Region	9 or 10 Month Contract	4.9.1	66
	11 or 12 Month Contract	4.9.2	67
STIPENDS OF POSTDOCTORAL FELLOWS			
Institutional Control and Work Field		5.1.1	68

		Table Number	Page
INDUSTRIAL CHEMICAL ENGINEERS			
Highest Degree	Years since the BS	6.1.1	69
Bachelor's Degree Holders			
Years since the B.S. and:			
Work Function		6.2.1	70
Geographic Region		6.2.2	71
Supervisory Status		6.2.3	72
Master's Degree Holders			
Years since the B.S. and:			
Work Function		6.3.1	73
Geographic Region		6.3.2	74
Supervisory Status		6.3.3	75
Ph.D. Degree Holders			
Years since the B.S. and:			
Work Function		6.4.1	76
Geographic Region		6.4.2	77
Supervisory Status		6.4.3	78
EMPLOYMENT AND UNEMPLOYMENT ON MARCH 1, 1989			
ALL RESPONDENTS			
Employment Status by Work Field		7.1.1	79
CHEMISTS			
Employment Status by:			
Highest Degree		8.1.1	81
	Men	8.1.2	82
	Women	8.1.3	83
Age		8.2.1	84
Race/Ethnicity		8.3.1	86
Citizenship		8.4.1	87
Type of Employer		8.5.1	88
	Industrial	8.5.2	89
	Academic	8.5.3	91
Non-academic Work Function		8.6.1	92
Work Specialty		8.7.1	94
Geographic Region		8.8.1	96

	Table Number	Page
UNEMPLOYED CHEMISTS		
Length of Unemployment by:		
Highest Degree	9.1.1	97
Men	9.1.2	98
Women	9.1.3	99
Age	9.2.1	100
Non-academic Work Function	9.3.1	102
Work Specialty	9.4.1	104
Geographic Region	9.5.1	106
DEMOGRAPHIC CHARACTERISTICS		
ALL RESPONDENTS		
Highest Degree and:		
Sex	10.1.1	107
Age	10.2.1	108
Men	10.2.2	109
Women	10.2.3	110
Work Specialty	10.3.1	111
Race/Ethnicity	10.4.1	112
Race/Ethnicity and:		
Sex	10.5.1	114
Citizenship	10.6.1	115
Geographic Regions and:		
Age	10.7.1	116
Non-academic Work Function	10.8.1	118
Work Specialty	10.9.1	120
Sex	10.10.1	122
Highest Degree	10.11.1	123

TECHNICAL NOTES

The target population of the 1989 Salary and Employment Status Survey was those ACS members who had U.S. mailing addresses, were not older than 70, and had neither student, retired, nor emeritus status. On January 31, 1989 the ACS membership totalled 131,163, of which approximately 86,000 were eligible for inclusion in the survey. A systematic sample of 20,000 members with non-chemical engineering degrees (mostly chemists) and all 6,843 members with chemical engineering degrees were selected from the target population.

The survey questionnaires were mailed to this sample of 26,843 members by bulk mail during the week of February 21. By the May 17 cut-off date, 11,946 (44.5%) usable questionnaires had been returned.

Members indicating a degree field of chemical engineering on the ACS membership record were oversampled this year in order to produce more detailed tables on chemical engineers' salaries. To make the data base from which the non-chemical engineers' tables were produced comparable to those of previous years, a random sample of 25% of those oversampled was drawn and included with the 25% sample of non-chemical engineers (the 20,000 out of approximately 79,000 non-chemical engineers eligible for inclusion in the survey).

Definitions

For the purposes of the survey analysis only, the following definitions were used:

Chemist:	A respondent who indicated a work specialty of chemistry or biochemistry (categories 2 through 15 of Part I, Question 2 on the questionnaire) or a non-chemistry work specialty (categories 16 and 17) and a degree field of chemistry or biochemistry.
Chemical Engineer:	A respondent who indicated a work specialty of chemical engineering or a degree field of chemical engineering (category 1 of Part I, Question 2 on the questionnaire).
Unemployed:	A respondent who is unemployed and seeking employment (category 4 of Part I, Question 3 on the questionnaire).

This report represents the respondents' principal annual salaries as of March 1, 1989. The respondent's age is given as of March 1, 1989. A respondent's geographic region refers to place of employment. A list of geographic regions and their member states is on page 18 of this report.

Proportions

The proportion of people falling within a certain cell in one of the tables is a sample proportion. The sample proportion is used to make statements about the corresponding population proportion, but, of course, the sample proportion generally is not exactly equal to the population proportion. A useful estimate of the representativeness of the sample proportion is the confidence interval. Such an interval estimate is illustrated in the following statement: "We assert with 95% confidence that the population proportion is between 0.04 and 0.06." A simple but adequate formula for a confidence interval centered on the sample proportion is

$$\text{p (lower)} = \hat{p} - z\,[\hat{p}\,(1 - \hat{p}) / n]^{\frac{1}{2}}$$
$$\text{and p (upper)} = \hat{p} + z\,[\hat{p}\,(1 - \hat{p}) / n]^{\frac{1}{2}}$$

where p (lower) = lower boundary of the interval
p (upper) = upper boundary of the interval
p = the sample proportion
z = a function of the level of confidence and is found in a table of the standard normal distribution.
n = the sample size

Inspection of the formula shows that the width of the confidence interval is inversely proportional to the square root of the sample size, so that proportions derived from small samples are not as precise as ones drawn from large samples. Also, if non-respondents differ from respondents with regard to the characteristics under consideration, the formula will overstate precision because the formula is based on assumption of 100% response.

Suppose a confidence interval is required for a group containing 1900 sample members. If the sample contains 95 persons with a specific characteristic, then the numbers that go into the formula are p=95/1900= 0.05 and n=1900. For a 95% confidence interval, z is about 2. Putting these numbers into the formula above we have:

$$\text{p (lower)} = \hat{p} - z\,[p\,(1 - \hat{p}) / n]^{\frac{1}{2}}$$
$$= 0.05 - 2\,[0.05\,(0.95)\,/1900]^{\frac{1}{2}}$$
$$= 0.05 - 0.01$$
$$= 0.04$$

$$\text{and similarly, p (upper)} = 0.05 + 0.01$$
$$= 0.06$$

Thus, a 95% confidence interval for p is from 4.0% to 6.0%. Although we cannot say that the population proportion is exactly 5.0%, we can be confident that it is between 4.0% and 6.0%. The 95% level of confidence means roughly that if this procedure were followed a large number of times using different samples of the same size, the population proportion would be within the calculated interval about 95% of the time.

Small Cell Count

If the number of responses in a cell of a salary table is small, then the sample salary statistics for that cell may not accurately estimate the corresponding population salary statistics. In general, a cell containing fewer than 15 responses does not provide a useful estimate of the median salary, and a cell containing fewer than 25 responses does not provide a useful estimate of the 25th or the 75th salary percentile. For this reason, cells containing fewer than 15 responses were suppressed in the tables in this book.

Median

If a sample of size n is arranged in ascending order of magnitude, the median Md is given by the $((n+1)/2)$th value. If $(n+1)/2$ is not an integer, then the median is a weighted average of the two values whose ranks are closest to $(n+1)/2$.

Discrepancies Among Tables

Some pairs of tables contain totals that should be identical but are not. For example, two tables that present information about PhD respondents should show the same total number of PhDs. They might, however, show different totals. To illustrate, if one table groups the PhDs according to specialty and the other groups them according to geographic region, the totals will differ unless the number who did not indicate their specialty is the same as the number who did not indicate their geographic region.

Comparing Salaries

Often questions arise concerning B.S. chemists' salaries as compared with M.S. chemists', or women's salaries as compared with men's. These and similar comparisons require caution.

Statistical tests should be performed to determine whether observed differences in salaries of various sample groups could be mere chance occurrences resulting from peculiarities of the sample. Whether a difference in salaries is "statistically significant" depends not only on the magnitude of the difference but also on the sample size and the magnitude of the sample standard deviations.

Discussion of statistical tests of significance can be found in *Introductory Statistics for Business and Economics* by Thomas H. Wonnacott and Ronald J. Wonnacott, N.Y.: Wiley, 1984; and other similar texts.

GEOGRAPHIC REGIONS

PACIFIC

Alaska
California
Hawaii
Oregon
Washington

MOUNTAIN

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

WEST NORTH CENTRAL

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

WEST SOUTH CENTRAL

Arkansas
Louisiana
Oklahoma
Texas

EAST NORTH CENTRAL

Illinois
Indiana
Michigan
Ohio
Wisconsin

EAST SOUTH CENTRAL

Alabama
Kentucky
Mississippi
Tennessee

MIDDLE ATLANTIC

New Jersey
New York
Pennsylvania

SOUTH ATLANTIC

Delaware
District of Columbia
Florida
Georgia
Maryland
North Carolina
South Carolina
Virginia
West Virginia

NEW ENGLAND

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Table 1.1.1

SALARIES of BS CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS
1989 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	1465	41,568	17,900	30,000	38,000	49,680
0-1	51	26,072	5,365	21,500	26,000	29,000
2-4	218	27,965	6,025	24,000	27,450	31,500
5-9	309	33,871	8,677	28,000	33,000	37,900
10-14	253	39,593	10,161	33,000	39,000	45,000
15-19	161	44,356	11,635	37,000	43,000	50,500
20-24	120	49,652	16,119	40,900	48,375	57,850
25-29	116	50,919	14,621	40,000	49,200	61,600
30-34	88	56,040	18,629	44,000	52,500	63,450
35-39	112	61,649	25,278	46,426	56,500	68,271
40 or more	37	57,982	43,337	40,000	53,000	60,000
Government						
Total	213	36,926	12,176	28,300	35,000	45,000
2-4	21	23,438	6,108	19,600	22,800	27,000
5-9	39	29,113	5,872	24,000	28,000	35,000
10-14	35	34,581	8,540	29,814	33,300	38,000
15-19	26	39,241	7,023	35,000	38,732	45,000
20-24	22	41,230	11,319	31,000	41,200	49,350
25-29	22	45,686	10,815	36,000	45,117	52,089
30-34	20	42,158	10,581	35,681	38,875	51,150
Other Nonacademic						
Total	161	40,343	28,947	27,000	35,000	45,000
2-4	33	24,914	4,683	22,000	24,200	28,100
5-9	31	33,351	7,323	28,500	31,500	36,000
10-14	29	35,837	8,216	30,000	38,000	43,500
15-19	20	40,873	11,881	31,500	40,500	48,900
High School						
Total	19	24,432	8,006	18,150	23,000	33,355
College or University						
Total	53	29,905	11,024	22,000	28,500	38,604

Note: Cells with fewer than 15 cases have been suppressed.

Table 1.1.2

SALARIES of MS CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS
1989 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	954	48,785	16,549	38,000	45,000	57,000
2-4	23	32,847	5,585	30,000	33,330	36,000
5-9	138	36,347	7,357	32,000	35,689	39,600
10-14	190	41,942	9,428	36,200	40,782	46,750
15-19	169	48,622	17,051	39,744	45,500	56,000
20-24	124	53,686	14,279	43,400	52,000	60,000
25-29	96	54,730	14,968	44,368	53,850	60,000
30-34	68	56,476	15,502	45,000	55,000	67,250
35-39	95	59,592	20,597	46,000	56,000	66,200
40 or more	51	62,176	19,064	51,600	60,000	66,050
Government						
Total	146	40,866	12,861	31,175	38,020	48,000
5-9	27	31,223	6,219	25,870	32,000	34,600
15-19	27	39,945	9,973	33,500	38,000	44,832
20-24	20	41,016	14,760	30,500	42,000	50,600
25-29	19	48,812	14,890	39,400	49,700	59,000
30-34	15	48,942	14,354	36,000	47,000	67,000
35-39	16	46,779	11,609	38,746	46,000	55,190
Other Nonacademic						
Total	121	48,863	22,224	37,000	45,000	55,931
10-14	23	41,935	12,546	35,500	42,000	47,000
15-19	27	45,807	10,470	40,000	42,500	52,336
20-24	16	48,129	26,148	32,350	44,700	58,900
High School						
Total	60	34,352	8,331	28,000	33,000	40,000
25-29	18	38,073	9,842	30,000	37,358	48,000
College or University						
Total	124	34,713	11,624	25,800	33,450	43,000
10-14	16	29,069	8,493	23,650	27,768	34,000
20-24	17	31,918	8,439	25,500	32,400	35,000
25-29	16	34,486	12,693	24,501	33,600	44,500
30-34	26	41,594	9,397	36,000	40,000	46,000
35-39	16	37,989	11,648	31,350	37,075	44,862

Note: Cells with fewer than 15 cases have been suppressed.

Table 1.1.3

SALARIES of PhD CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS
1989 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	2349	62,258	20,554	48,000	58,000	71,500
5-9	217	44,658	4,550	42,000	45,000	47,100
10-14	460	50,006	7,952	45,000	49,200	54,000
15-19	404	57,666	13,499	49,580	55,500	62,430
20-24	401	66,322	16,797	55,400	64,000	74,000
25-29	348	71,244	23,219	59,332	68,238	79,800
30-34	209	70,444	22,174	58,000	68,000	80,000
35-39	212	79,290	26,424	61,518	74,000	90,000
40 or more	97	75,187	25,790	55,000	72,000	88,000
Government						
Total	404	54,251	13,558	44,100	53,400	63,350
5-9	21	38,339	8,286	31,012	36,000	43,500
10-14	54	45,151	10,539	38,137	44,867	51,000
15-19	48	47,732	9,748	40,152	48,150	54,000
20-24	70	53,359	10,380	46,605	52,528	60,000
25-29	64	57,349	10,794	49,174	57,712	65,223
30-34	58	60,237	14,224	52,000	61,753	72,000
35-39	52	60,310	12,949	53,000	61,000	71,000
40 or more	37	63,446	14,794	54,000	64,000	74,300
Other Nonacademic						
Total	285	60,845	30,305	42,000	54,600	70,000
10-14	31	43,354	8,779	38,000	42,500	50,000
15-19	47	50,844	13,040	41,500	51,000	58,000
20-24	50	59,243	32,325	43,000	50,370	66,400
25-29	46	62,814	26,139	40,000	59,900	78,000
30-34	42	75,154	45,703	52,000	62,500	80,000
35-39	34	74,874	34,027	52,260	68,750	82,500
40 or more	23	66,196	22,050	57,000	63,000	75,000
High School						
Total	19	35,220	10,096	27,000	31,500	43,207
College or University						
Total	1563	46,746	17,745	33,800	43,000	55,000
5-9	65	30,587	5,392	26,800	30,000	34,100
10-14	199	35,369	9,462	30,000	33,700	39,950
15-19	204	38,658	11,536	30,000	36,700	45,501
20-24	243	46,205	18,837	35,000	43,000	53,000
25-29	328	47,540	14,929	36,845	45,000	56,000
30-34	237	53,994	16,205	42,000	52,000	64,600
35-39	176	54,263	19,083	41,050	50,000	63,000
40 or more	110	63,047	22,015	45,000	60,366	79,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.1.1

SALARIES of INDUSTRIAL CHEMISTS employed FULL-TIME
by DEGREE and YEARS SINCE BS
1989 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	1465	41,568	17,900	30,000	38,000	49,680
0-1	51	26,072	5,365	21,500	26,000	29,000
2-4	218	27,965	6,025	24,000	27,450	31,500
5-9	309	33,871	8,677	28,000	33,000	37,900
10-14	253	39,593	10,161	33,000	39,000	45,000
15-19	161	44,356	11,635	37,000	43,000	50,500
20-24	120	49,652	16,119	40,900	48,375	57,850
25-29	116	50,919	14,621	40,000	49,200	61,600
30-34	88	56,040	18,629	44,000	52,500	63,450
35-39	112	61,649	25,278	46,426	56,500	68,271
40 or more	37	57,982	43,337	40,000	53,000	60,000
MS						
Total	954	48,785	16,549	38,000	45,000	57,000
2-4	23	32,847	5,585	30,000	33,330	36,000
5-9	138	36,347	7,357	32,000	35,689	39,600
10-14	190	41,942	9,428	36,200	40,782	46,750
15-19	169	48,622	17,051	39,744	45,500	56,000
20-24	124	53,686	14,279	43,400	52,000	60,000
25-29	96	54,730	14,968	44,368	53,850	60,000
30-34	68	56,476	15,502	45,000	55,000	67,250
35-39	95	59,592	20,597	46,000	56,000	66,200
40 or more	51	62,176	19,064	51,600	60,000	66,050
PhD						
Total	2349	62,258	20,554	48,000	58,000	71,500
5-9	217	44,658	4,550	42,000	45,000	47,100
10-14	460	50,006	7,952	45,000	49,200	54,000
15-19	404	57,666	13,499	49,580	55,500	62,430
20-24	401	66,322	16,797	55,400	64,000	74,000
25-29	348	71,244	23,219	59,332	68,238	79,800
30-34	209	70,444	22,174	58,000	68,000	80,000
35-39	212	79,290	26,424	61,518	74,000	90,000
40 or more	97	75,187	25,790	55,000	72,000	88,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.1.2

SALARIES of MEN CHEMISTS employed FULL-TIME in INDUSTRY
by DEGREE and YEARS SINCE BS
1989 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	1076	44,532	19,043	32,000	41,000	52,500
0-1	27	25,739	5,596	20,800	26,000	27,500
2-4	113	29,311	6,351	25,000	28,800	33,000
5-9	202	34,579	7,893	29,200	34,000	39,500
10-14	188	40,466	10,712	33,914	40,000	45,750
15-19	137	44,853	11,926	37,500	44,000	51,000
20-24	98	51,654	16,064	42,700	50,000	58,339
25-29	92	52,969	14,248	42,000	53,380	63,500
30-34	79	58,196	18,115	45,000	55,000	66,360
35-39	109	62,020	25,431	47,000	56,600	69,101
40 or more	31	60,623	46,808	40,000	54,000	64,000
MS						
Total	756	50,656	17,048	39,500	48,000	58,710
5-9	84	37,347	8,147	32,540	36,500	40,000
10-14	146	42,253	9,588	36,500	41,000	47,200
15-19	138	49,389	18,255	40,000	46,800	57,000
20-24	106	55,169	14,555	44,575	54,000	60,875
25-29	81	56,855	14,676	48,000	54,200	61,200
30-34	55	56,868	13,601	45,350	55,260	68,000
35-39	90	60,185	20,328	46,500	56,000	66,200
40 or more	44	62,841	20,218	51,300	59,590	66,253
PhD						
Total	2137	63,341	20,810	49,500	59,600	72,000
5-9	167	44,766	4,670	42,000	44,800	47,320
10-14	384	50,342	8,039	45,000	49,810	54,320
15-19	373	57,936	13,634	49,900	55,500	62,400
20-24	377	66,421	16,518	55,740	64,000	74,000
25-29	333	71,942	22,944	60,000	69,100	80,000
30-34	201	71,068	22,223	58,000	68,500	80,000
35-39	207	79,623	26,564	62,000	74,000	90,000
40 or more	94	75,927	25,846	55,000	72,000	90,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.1.3

SALARIES of WOMEN CHEMISTS employed FULL-TIME in INDUSTRY
by DEGREE and YEARS SINCE BS
1989 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	385	33,381	10,657	26,400	31,000	38,500
0-1	24	26,447	5,187	23,458	25,650	29,063
2-4	105	26,517	5,311	23,920	26,400	29,300
5-9	104	32,555	10,010	27,310	31,000	35,546
10-14	64	37,131	7,958	30,250	37,982	42,550
15-19	24	41,520	9,528	35,000	39,150	49,700
20-24	22	40,732	13,351	29,760	36,250	48,890
25-29	24	43,059	13,581	36,000	40,040	47,425
MS						
Total	195	41,576	12,141	33,500	39,300	46,500
5-9	54	34,791	5,648	31,000	34,500	39,240
10-14	42	40,859	9,047	35,100	40,000	42,500
15-19	31	45,208	9,570	38,700	42,400	48,900
20-24	18	44,953	8,500	39,000	44,500	48,000
PhD						
Total	204	50,924	13,165	44,000	48,000	55,938
5-9	48	44,278	4,230	41,940	45,000	47,250
10-14	75	48,186	7,282	44,000	48,000	50,700
15-19	30	54,703	11,529	46,800	55,318	63,000
20-24	23	63,444	20,500	53,580	61,800	74,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.2.1

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by WORK SPECIALTY and YEARS SINCE BS
1989 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochem/Biotech						
Total	32	39,091	18,389	28,060	34,296	42,500
General chemistry						
Total	78	40,949	18,613	29,750	36,000	49,990
5-9	20	33,853	7,648	28,250	31,000	41,350
10-14	15	38,321	9,694	32,000	36,000	45,000
Agricultural chemistry						
Total	57	43,456	22,387	28,250	40,000	52,000
Analytical chemistry						
Total	449	37,306	12,532	27,650	35,000	44,400
0-1	22	25,835	5,920	21,500	25,360	28,500
2-4	80	26,734	6,345	22,150	26,175	29,000
5-9	92	33,708	7,326	28,496	32,900	38,000
10-14	93	37,024	7,903	30,500	37,150	42,400
15-19	47	41,785	10,799	35,000	40,800	49,000
20-24	31	46,619	12,785	35,500	46,056	55,400
25-29	35	49,117	13,922	40,200	50,000	60,000
30-34	20	46,953	14,953	37,992	45,808	58,385
35-39	26	50,621	16,108	39,900	49,750	62,500
Environmental chemistry						
Total	146	38,466	15,023	28,500	37,000	43,000
2-4	24	26,174	6,351	22,440	26,000	30,980
5-9	43	34,324	8,011	28,000	33,200	40,200
10-14	24	44,467	11,863	35,852	40,912	55,000
15-19	15	38,254	6,492	36,000	39,300	42,450
Inorganic chemistry						
Total	37	42,772	17,540	32,000	39,000	49,000
Materials science						
Total	69	44,160	16,973	31,200	40,000	53,200
Medicinal/Pharmaceutical						
Total	75	40,840	13,766	31,000	36,816	47,025
5-9	15	33,236	6,874	30,000	34,800	36,000
Organic chemistry						
Total	140	41,767	14,906	30,000	38,915	51,000
2-4	21	28,325	3,882	26,000	28,000	31,000
5-9	28	31,719	5,751	26,750	30,500	37,400
10-14	23	42,679	14,409	31,600	40,000	51,500
Physical chemistry						
Total	23	47,154	15,798	36,700	46,500	57,600

Table 2.2.1 Continued

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Polymer chemistry						
Total	193	47,515	25,648	33,170	42,000	56,520
2-4	22	31,407	6,509	27,000	30,000	33,180
5-9	34	33,495	6,496	27,900	32,000	37,000
10-14	34	40,807	8,406	36,600	40,000	43,000
15-19	22	49,913	12,391	42,000	50,500	58,000
20-24	17	52,572	15,338	42,700	48,000	58,680
25-29	16	54,821	13,441	45,150	58,440	64,750
35-39	28	63,718	25,475	47,500	60,000	71,551
Other chemical science						
Total	54	40,050	13,024	31,000	35,677	50,200
Business Administration						
Total	38	57,530	30,319	35,000	50,786	71,000
Other non-chem						
Total	74	46,820	16,750	34,500	44,250	57,000
5-9	17	38,682	10,656	31,400	34,500	45,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.2.2

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	105	56,255	19,490	44,000	55,000	64,500
10-14	20	46,789	10,137	40,000	45,750	52,750
15-19	15	53,785	12,209	45,500	54,000	60,000
35-39	20	68,320	27,853	52,750	61,750	77,700
Basic research						
Total	86	33,469	9,827	27,000	31,100	37,150
2-4	25	28,936	6,014	26,000	28,200	31,800
5-9	23	31,964	6,644	26,160	32,000	35,854
Applied research						
Total	463	38,205	11,438	29,400	36,000	45,000
0-1	19	27,336	3,702	25,220	26,700	29,400
2-4	78	28,928	5,594	25,800	28,000	32,000
5-9	111	33,460	7,027	28,000	33,020	37,800
10-14	72	38,023	7,486	33,900	38,000	42,050
15-19	50	43,022	10,711	35,000	41,400	50,000
20-24	43	44,354	10,263	36,000	43,000	50,000
25-29	25	46,360	12,243	37,000	45,000	53,460
30-34	20	49,574	13,725	41,000	46,408	58,500
35-39	31	51,799	12,313	45,000	51,000	62,100
General Mgt						
Total	139	53,282	31,034	37,500	45,000	60,000
5-9	27	38,074	8,647	30,000	38,000	45,000
10-14	27	46,496	12,868	37,500	42,700	57,000
15-19	23	47,103	10,727	40,040	43,220	53,000
25-29	15	52,387	16,195	40,000	48,000	69,000
35-39	16	78,421	32,586	55,200	70,220	96,000
Marketing						
Total	153	46,031	17,648	34,000	44,000	56,000
2-4	17	29,924	9,332	22,740	28,378	36,936
5-9	24	36,100	9,732	30,000	32,500	41,850
10-14	25	42,074	9,526	36,000	40,000	46,000
15-19	18	49,216	13,316	43,000	50,600	57,961
20-24	17	54,265	9,914	50,200	52,500	61,000
35-39	15	63,577	29,390	44,000	57,300	77,000
Production						
Total	267	36,636	12,086	27,248	35,000	43,000
2-4	45	25,941	4,918	22,300	25,000	30,000
5-9	62	32,760	6,656	27,200	31,900	36,000
10-14	57	35,495	8,395	29,000	35,500	42,200
15-19	27	41,787	11,900	34,500	38,000	48,000
20-24	16	48,581	12,405	43,000	50,600	57,500
25-29	22	45,988	13,518	42,000	46,050	50,000
Forensics						
Total	57	34,008	11,608	26,400	30,000	40,000
5-9	15	31,182	6,317	26,500	30,550	35,000

Table 2.2.2 Continued

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Chem info services						
Total	25	36,702	13,576	25,320	35,000	46,000
Computers						
Total	15	45,251	16,763	33,000	45,000	57,000
Consulting						
Total	38	42,091	18,740	30,000	36,125	48,000
Other						
Total	61	39,192	16,642	29,750	35,000	44,000
5-9	16	33,268	6,818	27,060	33,720	38,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.2.3

SALARIES of BS CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1989 ACS Salary Survey

TYPE OF INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-manufacturing						
Total	204	35,395	15,544	25,650	31,700	41,500
2-4	48	25,956	6,963	20,800	24,350	30,080
5-9	59	34,223	13,101	27,000	31,000	40,000
10-14	28	42,154	12,871	31,350	40,500	51,500
15-19	23	41,305	10,614	36,000	40,500	50,140
Basic chemicals						
Total	66	52,270	25,176	35,175	48,595	60,000
Specialty chemicals						
Total	213	43,365	16,276	31,000	40,000	52,500
2-4	34	29,454	7,804	24,300	28,400	32,800
5-9	43	33,595	6,930	29,700	32,000	39,000
10-14	40	42,091	10,850	34,100	40,000	47,180
15-19	16	47,467	15,675	36,250	46,374	53,050
20-24	20	48,789	8,569	43,000	48,500	53,750
25-29	21	56,789	16,570	48,000	55,000	69,456
Agricultural chemicals						
Total	38	40,068	12,133	30,000	38,723	49,000
Coatings						
Total	83	42,747	31,344	29,760	37,000	46,000
5-9	16	32,072	8,987	26,350	30,750	35,527
10-14	17	40,329	9,216	35,000	42,000	44,300
Electronics						
Total	61	42,634	14,845	31,000	40,700	52,620
5-9	20	38,746	11,020	31,600	36,000	47,300
Food						
Total	69	39,142	19,447	27,000	35,000	44,000
Glass						
Total	22	38,526	14,308	27,000	35,350	49,100
Metals						
Total	50	42,599	15,696	31,000	39,500	52,500
Paper						
Total	15	41,142	11,646	27,000	42,000	49,800
Petroleum						
Total	55	44,379	14,113	35,000	40,000	53,400
Pharmaceuticals						
Total	234	39,395	13,031	30,000	35,850	44,700
2-4	46	29,164	4,709	26,000	28,104	31,800
5-9	51	32,875	5,162	30,000	32,200	35,200
10-14	35	39,100	7,878	35,000	38,500	43,400
15-19	23	43,733	9,850	37,500	40,800	48,000
20-24	24	48,808	14,216	41,150	44,250	56,550
25-29	18	50,604	13,226	40,200	46,675	62,000

Table 2.2.3 Continued

TYPE OF INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Plastics						
Total	84	46,945	18,532	34,750	41,750	57,300
5-9	16	39,278	7,961	35,000	36,850	41,250
10-14	16	37,057	7,983	29,850	37,000	43,750
Rubber						
Total	35	50,636	22,986	35,000	46,000	59,400
Soaps						
Total	25	36,489	11,586	29,000	35,500	40,000
Other manufactures						
Total	211	41,401	16,185	30,000	38,000	49,400
2-4	24	27,408	3,881	24,900	26,600	31,200
5-9	41	33,534	6,769	27,200	33,000	37,000
10-14	39	39,327	10,042	33,000	38,000	45,000
15-19	26	46,541	11,129	39,600	45,650	51,000
20-24	21	48,135	15,967	37,500	42,500	59,000
25-29	16	47,962	14,635	36,940	47,310	60,000
30-34	16	48,831	19,878	34,450	47,600	61,500
35-39	15	64,298	26,682	45,000	61,000	80,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.2.4

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by GEOGRAPHIC REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	159	45,026	27,294	31,800	40,000	52,000
2-4	28	29,190	6,943	24,800	28,277	33,662
5-9	35	36,571	8,742	30,000	36,000	43,000
10-14	23	44,267	11,667	36,600	42,000	53,500
15-19	23	44,502	10,772	37,500	42,000	51,000
25-29	15	55,419	11,094	48,000	54,230	65,000
Mountain						
Total	43	39,095	14,558	30,129	39,600	47,200
West North Central						
Total	91	35,997	12,402	26,275	34,000	40,800
5-9	20	29,953	4,930	26,040	27,700	34,000
10-14	21	32,367	6,026	27,947	33,828	36,200
West South Central						
Total	116	45,389	17,592	34,200	43,500	52,250
5-9	21	34,997	7,724	30,500	35,220	38,000
10-14	25	41,536	8,208	35,500	42,200	46,000
15-19	19	49,471	11,043	40,000	49,140	57,961
East North Central						
Total	368	39,865	16,559	29,450	36,000	46,028
0-1	15	27,799	5,816	23,816	25,500	30,900
2-4	61	27,333	4,516	23,748	27,000	30,200
5-9	85	32,300	6,772	28,000	31,700	36,000
10-14	63	40,806	9,987	34,500	40,000	45,000
15-19	29	46,498	14,446	34,650	47,025	50,140
20-24	36	48,742	21,274	39,350	44,250	52,250
25-29	27	45,145	11,955	35,000	45,448	53,300
30-34	20	49,908	15,212	43,296	48,608	58,000
35-39	23	66,261	27,188	48,500	58,000	84,000
East South Central						
Total	44	37,239	13,795	26,000	38,000	42,650
Middle Atlantic						
Total	356	41,624	16,209	30,000	38,075	50,000
2-4	62	28,750	5,867	24,500	27,825	32,000
5-9	77	33,902	7,865	28,250	33,000	39,500
10-14	55	39,397	10,229	32,000	40,000	46,660
15-19	40	42,722	10,905	36,992	40,900	46,600
20-24	25	50,583	14,428	42,600	49,000	57,700
25-29	22	53,118	17,135	40,000	54,500	69,000
30-34	28	59,232	21,261	45,000	51,500	75,150
35-39	25	62,176	14,773	54,000	60,900	74,000

Table 2.2.4 Continued

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
South Atlantic						
Total	182	42,981	15,970	30,000	40,000	55,000
2-4	19	27,130	6,180	24,000	27,600	28,500
5-9	38	34,300	7,142	29,000	33,000	39,528
10-14	36	40,248	10,890	30,800	39,500	45,664
15-19	15	46,758	11,820	37,500	50,000	55,000
20-24	20	48,624	11,706	41,850	49,100	57,760
25-29	15	58,115	16,506	45,000	60,000	69,850
35-39	15	53,599	20,749	39,900	55,860	64,500
New England						
Total	86	43,303	18,942	30,300	38,000	49,400
5-9	22	37,721	17,744	30,000	33,700	38,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.2.5

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	824	35,518	11,626	27,000	33,200	41,000
0-1	40	25,693	5,397	21,150	25,500	29,000
2-4	172	27,250	5,634	23,600	26,900	30,700
5-9	205	31,769	6,168	27,000	31,000	35,600
10-14	123	35,697	7,894	30,000	35,052	40,180
15-19	75	39,556	9,180	33,000	38,000	48,000
20-24	59	44,109	11,262	35,892	42,780	50,200
25-29	53	44,306	13,556	37,000	42,000	50,000
30-34	34	46,129	13,681	36,816	45,100	57,000
35-39	45	50,941	16,064	40,000	51,000	58,000
40 or more	18	48,359	13,195	38,400	48,000	55,000
Supervisors						
Total	623	49,428	21,306	36,500	45,000	58,000
2-4	45	30,684	6,789	25,750	30,000	34,500
5-9	100	37,810	11,113	30,750	36,000	43,000
10-14	128	43,384	10,755	37,000	42,050	49,995
15-19	86	48,543	11,974	40,000	46,950	57,000
20-24	59	55,339	18,249	47,000	52,000	61,000
25-29	61	56,538	13,337	46,500	59,000	65,000
30-34	52	62,849	18,842	49,050	56,510	75,150
35-39	66	68,354	27,706	52,000	60,400	77,000
40 or more	17	67,758	61,894	40,000	55,500	60,600

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.3.1

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by WORK SPECIALTY and YEARS SINCE BS
1989 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	20	41,219	12,829	31,050	38,000	46,000
Biotechnology						
Total	27	47,900	16,687	36,500	41,000	53,500
General chemistry						
Total	29	48,907	13,021	40,000	49,540	55,000
Agricultural chemistry						
Total	34	49,753	17,040	36,000	48,650	59,180
Analytical chemistry						
Total	244	45,987	13,652	36,634	42,775	53,457
5-9	35	35,076	5,626	30,400	35,000	39,600
10-14	50	41,067	10,096	34,840	40,050	45,000
15-19	49	45,332	9,403	38,400	42,000	51,800
20-24	38	51,856	13,906	42,000	51,092	59,600
25-29	21	51,607	16,117	43,000	49,300	57,000
30-34	21	54,727	17,784	45,350	50,500	58,920
35-39	15	52,750	15,436	40,000	55,000	61,044
Environmental chemistry						
Total	78	45,768	14,524	37,000	43,000	53,500
10-14	28	42,014	11,006	37,000	40,485	44,000
Materials science						
Total	55	54,089	19,001	42,000	52,000	64,000
Medicinal/Pharmaceutical						
Total	67	46,012	11,546	37,000	43,000	52,000
15-19	16	47,956	6,551	42,200	47,000	51,800
Organic chemistry						
Total	105	46,676	11,177	38,000	45,000	54,000
10-14	16	42,560	7,992	37,500	41,380	48,500
15-19	20	47,272	10,192	38,958	45,000	56,600
35-39	18	52,787	10,870	45,000	51,930	58,000
Physical chemistry						
Total	24	55,601	14,962	42,700	55,200	65,500
Polymer chemistry						
Total	121	50,732	18,803	39,700	47,200	57,377
5-9	26	35,911	7,285	31,000	35,939	40,000
10-14	16	44,350	5,413	40,100	45,000	47,100
15-19	21	49,029	9,681	41,000	46,600	57,000
25-29	18	61,523	15,163	50,000	57,500	68,000
35-39	15	60,329	37,338	46,000	50,000	57,732

Table 2.3.1 Continued

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Other chemical science						
Total	70	53,498	27,428	37,500	47,000	60,000
10-14	16	38,527	7,888	31,870	36,623	44,900
Business Administration						
Total	29	63,463	17,472	52,000	60,000	70,216
Other non-chem						
Total	51	49,136	13,931	39,000	45,000	58,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.3.2

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	121	60,915	18,566	49,000	58,000	69,300
10-14	15	46,392	6,187	42,500	47,500	51,600
15-19	16	59,225	8,688	51,650	59,500	66,400
20-24	25	64,286	17,459	54,000	60,750	70,000
35-39	19	63,015	19,895	49,200	60,000	65,000
Basic research						
Total	84	43,087	9,991	36,000	42,050	48,050
5-9	18	33,897	3,794	31,200	34,100	36,900
10-14	20	40,138	5,445	38,500	40,150	42,830
15-19	19	44,647	6,843	40,915	43,000	47,640
Applied research						
Total	323	45,979	12,449	37,000	43,000	53,700
5-9	64	36,826	7,822	32,150	36,200	40,200
10-14	64	39,945	6,429	35,000	39,950	44,000
15-19	50	44,690	8,624	38,800	42,550	48,000
20-24	37	51,193	9,986	43,000	50,000	57,000
25-29	28	55,316	13,252	45,868	54,500	60,600
30-34	17	49,362	10,094	42,000	47,000	55,000
35-39	34	58,423	12,486	52,000	56,500	64,000
40 or more	19	58,465	13,048	52,000	60,000	65,000
General Mgt						
Total	93	57,074	28,492	40,000	48,300	63,600
10-14	19	45,251	13,090	37,900	41,000	48,000
15-19	16	62,095	44,151	40,000	49,890	61,600
Marketing						
Total	88	48,112	12,079	39,370	47,000	59,500
10-14	20	43,547	11,565	36,350	40,525	46,000
15-19	20	50,565	10,340	41,000	50,650	60,000
Production						
Total	112	45,239	12,470	36,000	42,575	53,432
10-14	20	41,627	10,860	35,200	39,583	47,100
15-19	27	45,663	10,378	39,744	43,000	56,196
20-24	17	48,896	13,186	39,000	44,000	52,000
Forensics						
Total	25	39,980	10,648	33,000	37,000	47,788
Chem info services						
Total	24	45,293	12,506	36,700	44,450	54,000
Consulting						
Total	20	48,059	14,395	36,500	47,000	60,000
Other						
Total	39	47,055	13,280	37,500	45,000	54,600

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.3.3

SALARIES of MS CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1989 ACS Salary Survey

TYPE OF INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-manufacturing						
Total	113	44,990	14,662	36,000	42,400	52,000
5-9	16	33,901	6,729	28,050	34,500	39,540
10-14	34	41,610	11,667	34,000	41,000	44,100
15-19	15	49,131	16,501	35,000	48,500	59,600
Basic chemicals						
Total	44	53,244	16,223	43,043	49,600	61,500
Specialty chemicals						
Total	137	51,389	18,403	40,000	48,100	58,200
10-14	24	42,240	6,743	37,500	43,750	46,975
15-19	28	50,215	11,247	42,350	47,434	58,500
20-24	22	55,876	16,250	44,500	53,595	65,000
35-39	20	63,456	33,171	45,500	54,000	63,100
Agricultural chemicals						
Total	27	47,307	11,703	39,000	43,000	55,500
Biochemical products						
Total	18	51,646	18,515	36,500	48,000	65,000
Coatings						
Total	37	46,459	14,245	35,878	42,500	51,600
Electronics						
Total	48	51,149	19,549	40,000	46,275	58,000
Food						
Total	36	49,475	16,710	37,000	46,250	58,000
Metals						
Total	28	43,558	9,844	35,320	42,000	49,700
Petroleum						
Total	26	56,314	18,759	40,800	52,331	67,200
Pharmaceuticals						
Total	197	46,268	15,258	36,500	41,500	52,000
5-9	43	34,437	4,365	31,200	33,900	38,000
10-14	41	41,577	8,108	36,800	40,000	43,000
15-19	39	45,439	8,041	40,000	42,876	51,600
20-24	23	49,428	10,272	42,000	48,000	53,500
30-34	15	57,531	18,083	42,000	63,000	69,168
Plastics						
Total	49	52,057	12,774	43,000	51,840	58,000

Table 2.3.3 Continued

TYPE OF INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Other manufactures						
Total	194	49,293	17,930	38,000	47,750	57,000
5-9	24	36,113	9,097	32,000	35,000	38,626
10-14	34	43,692	9,341	38,500	42,250	49,000
15-19	37	52,422	30,580	38,800	45,500	58,000
20-24	21	50,694	9,455	47,000	52,000	57,000
25-29	22	52,674	12,270	43,500	51,850	58,000
35-39	23	56,968	10,519	52,000	55,200	60,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.3.4

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by GEOGRAPHIC REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	97	50,192	15,129	37,920	50,000	59,000
10-14	18	44,799	14,988	36,000	38,543	49,000
15-19	21	44,615	8,353	38,844	42,876	50,000
20-24	17	55,701	12,488	50,000	59,000	65,000
Mountain						
Total	22	44,870	10,885	38,200	43,750	47,000
West North Central						
Total	41	45,118	13,152	35,000	43,735	51,800
West South Central						
Total	68	52,345	18,476	40,000	45,425	63,400
15-19	16	52,681	13,814	42,480	58,500	62,400
East North Central						
Total	215	48,389	14,889	37,000	45,000	57,000
5-9	38	34,937	5,718	31,000	35,000	37,000
10-14	37	42,329	8,683	37,000	41,850	47,000
15-19	39	46,260	10,729	38,000	43,000	56,166
20-24	31	53,156	12,430	43,000	51,720	60,000
25-29	24	58,752	18,372	49,140	55,000	63,206
35-39	20	60,135	17,008	45,500	56,500	77,240
East South Central						
Total	38	47,793	11,902	40,000	46,550	54,000
Middle Atlantic						
Total	273	48,810	16,641	37,952	45,500	56,196
5-9	35	37,291	7,457	32,200	36,500	39,800
10-14	54	40,753	8,270	34,840	39,052	46,750
15-19	47	48,940	9,807	40,915	47,000	57,500
20-24	32	53,183	15,020	41,175	49,000	59,000
25-29	27	56,066	14,107	46,500	54,000	65,000
30-34	18	51,581	12,243	40,000	48,450	63,000
35-39	33	59,000	26,664	45,750	52,800	65,000
40 or more	19	61,985	21,313	50,000	59,180	66,050
South Atlantic						
Total	120	48,109	21,051	37,000	44,500	55,000
5-9	25	36,270	8,803	31,000	34,000	40,000
10-14	27	42,276	8,498	37,000	41,000	46,500
15-19	16	55,369	45,241	36,750	44,900	55,000
New England						
Total	71	49,322	18,180	38,800	44,000	57,000
10-14	19	47,584	10,496	40,000	44,000	52,000
15-19	15	51,599	13,864	41,000	49,000	63,600

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.3.5

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	485	43,143	11,925	35,000	40,800	48,776
2-4	21	32,595	5,789	30,000	33,000	34,500
5-9	99	34,640	6,734	31,000	34,440	37,500
10-14	99	39,296	8,076	34,500	39,000	42,660
15-19	81	43,092	8,103	38,300	42,000	47,500
20-24	54	48,264	10,900	40,900	46,562	54,000
25-29	40	48,620	14,513	40,700	45,000	55,980
30-34	28	49,058	10,720	41,000	46,800	56,000
35-39	42	55,879	12,643	45,500	54,350	60,576
40 or more	21	55,149	13,247	51,600	56,844	60,000
Supervisors						
Total	460	54,742	18,433	42,907	52,000	62,000
5-9	39	40,679	7,164	36,000	40,200	44,000
10-14	88	45,039	10,003	38,675	43,250	49,750
15-19	86	53,828	21,339	42,876	51,640	61,000
20-24	70	57,868	15,213	49,296	56,514	65,000
25-29	55	59,193	13,931	50,000	55,000	65,000
30-34	39	60,558	14,914	52,000	60,000	70,000
35-39	51	63,732	24,571	49,200	60,000	70,800
40 or more	30	67,096	21,090	52,000	64,500	70,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.4.1

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by WORK SPECIALTY and YEARS SINCE BS
1989 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	78	60,359	18,876	48,000	54,000	68,000
10-14	21	49,663	7,596	45,000	50,000	52,000
20-24	19	63,464	17,658	54,600	59,600	69,600
Biotechnology						
Total	97	61,727	21,712	47,500	57,500	71,232
10-14	30	50,072	8,801	42,000	50,450	54,200
15-19	26	63,497	26,319	46,800	59,500	75,000
20-24	15	74,580	11,122	69,000	70,000	80,000
General chemistry						
Total	25	65,538	16,904	54,540	63,000	77,000
Agricultural chemistry						
Total	91	58,749	19,668	47,800	54,000	65,000
10-14	18	48,069	7,250	42,600	45,905	51,796
15-19	15	53,768	5,685	50,000	52,800	56,000
25-29	23	65,875	24,142	56,000	64,000	70,500
Analytical chemistry						
Total	376	57,088	17,411	45,000	52,000	65,388
5-9	53	44,591	4,001	42,000	45,000	46,800
10-14	84	47,621	7,992	43,360	47,025	52,568
15-19	68	55,650	11,106	48,000	55,000	60,000
20-24	67	63,339	16,912	51,300	62,500	72,000
25-29	43	65,610	18,840	50,000	65,000	78,000
30-34	19	63,726	10,581	53,000	60,800	75,000
35-39	28	74,202	31,117	51,618	70,300	87,000
Clinical chemistry						
Total	26	52,958	11,944	43,000	52,650	60,300
Environmental chemistry						
Total	70	62,523	25,675	44,500	54,500	77,500
15-19	15	54,660	14,632	44,500	53,000	61,000
20-24	19	64,622	22,427	50,000	63,720	79,000
Inorganic chemistry						
Total	78	61,138	15,982	48,100	56,850	69,000
10-14	19	51,370	7,451	45,000	52,620	55,200
15-19	18	55,970	9,732	50,000	53,900	57,500
Materials science						
Total	139	62,081	15,578	51,000	60,000	70,000
10-14	30	51,304	6,262	48,000	50,750	56,000
15-19	18	56,472	6,109	52,300	55,000	62,460
20-24	24	68,880	20,743	59,000	63,500	75,400
25-29	17	71,782	8,502	68,000	69,600	76,500
35-39	17	67,227	8,599	62,000	65,000	71,000

Table 2.4.1 Continued

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Medicinal/Pharmaceutical						
Total	193	66,386	21,938	52,000	61,200	77,000
10-14	48	52,503	9,382	46,525	52,250	58,150
15-19	20	57,961	9,556	52,250	57,550	63,400
20-24	35	70,336	17,592	56,800	69,000	78,000
25-29	29	79,231	19,291	63,000	78,000	91,000
30-34	16	75,350	31,435	66,750	71,500	84,000
35-39	18	86,917	26,876	71,800	80,000	90,000
Organic chemistry						
Total	362	59,892	17,387	47,500	56,400	69,000
5-9	42	43,602	4,903	42,000	43,900	45,500
10-14	78	49,418	6,767	45,500	48,050	52,260
15-19	60	56,265	10,571	49,950	54,850	60,000
20-24	51	64,449	14,244	55,000	65,000	72,600
25-29	55	70,828	15,596	61,500	68,160	78,400
30-34	35	71,423	26,290	55,172	68,700	87,000
35-39	29	74,009	19,216	61,000	69,000	82,320
Physical chemistry						
Total	168	61,718	16,639	50,950	59,300	70,000
10-14	32	51,750	8,575	45,600	50,950	53,350
15-19	32	59,659	13,693	52,200	58,000	63,000
20-24	26	64,898	10,426	58,500	61,610	72,225
25-29	19	65,588	20,361	55,000	60,000	77,766
30-34	25	64,810	13,333	58,000	63,000	69,900
Polymer chemistry						
Total	422	63,578	20,235	49,000	60,000	72,000
5-9	38	44,386	3,784	42,000	44,640	46,600
10-14	68	50,837	7,491	46,500	48,100	54,500
15-19	75	57,715	10,516	50,000	56,000	65,000
20-24	67	68,199	15,415	57,000	66,000	75,000
25-29	68	71,246	23,145	60,150	68,708	76,000
30-34	40	69,032	16,836	58,000	66,100	76,600
35-39	42	77,864	26,699	61,000	71,050	84,000
40 or more	24	79,667	28,768	60,100	74,000	95,375
Other chemical science						
Total	70	61,809	16,094	50,600	59,250	72,000
Business Administration						
Total	77	84,771	35,180	64,000	75,000	96,000
20-24	17	79,852	22,040	65,280	75,600	82,680
25-29	22	90,828	45,305	68,000	74,000	96,000
Other non-chem						
Total	77	70,164	29,377	48,000	63,240	84,000
20-24	15	63,258	18,937	50,000	62,580	70,000
25-29	15	72,905	30,750	61,500	73,000	90,200

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.4.2

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	532	76,235	22,818	61,018	72,163	85,000
10-14	48	55,990	10,568	49,570	54,500	63,250
15-19	89	66,384	16,185	56,000	65,000	73,800
20-24	126	75,354	15,786	66,000	72,500	83,000
25-29	110	81,912	21,433	68,600	75,000	92,400
30-34	53	81,721	25,374	67,000	79,500	89,218
35-39	67	92,065	26,464	78,000	86,000	102,000
40 or more	29	86,080	29,807	70,000	88,000	100,000
Basic research						
Total	335	56,015	12,883	46,200	53,000	63,000
5-9	51	44,427	3,579	42,000	44,000	45,500
10-14	101	50,582	7,260	46,100	49,700	53,400
15-19	54	53,368	7,712	47,520	52,850	58,400
20-24	42	63,137	11,615	55,000	62,150	72,000
25-29	35	65,249	14,449	55,875	63,000	70,832
30-34	24	68,333	14,794	58,050	68,350	76,370
35-39	22	67,104	12,329	58,000	66,625	72,600
Applied research						
Total	983	55,552	12,781	46,650	53,000	62,000
5-9	127	45,019	4,649	42,500	45,000	48,000
10-14	256	49,129	6,384	44,870	48,050	53,150
15-19	177	54,541	9,696	48,060	53,000	59,600
20-24	130	59,607	10,597	52,000	58,740	66,000
25-29	113	63,920	13,004	55,000	63,000	75,000
30-34	70	63,207	15,068	57,000	62,825	72,000
35-39	74	66,726	14,067	57,400	63,750	79,100
40 or more	35	65,273	21,326	53,000	63,120	73,440
General Mgt						
Total	116	81,293	38,294	59,000	73,010	95,500
15-19	18	64,261	22,762	55,000	59,500	75,500
20-24	25	73,758	24,415	60,000	68,000	95,000
25-29	21	94,544	49,945	66,000	82,300	96,000
30-34	17	82,760	35,122	62,500	85,000	96,000
35-39	17	110,041	43,083	76,000	100,000	145,000
Marketing						
Total	86	59,539	15,595	49,800	57,000	70,000
10-14	15	50,135	10,394	43,000	49,800	58,000
15-19	16	59,850	15,069	54,500	57,500	70,000
20-24	18	68,671	16,845	55,000	66,700	80,000
25-29	16	62,683	17,828	54,060	64,000	73,100
Production						
Total	79	55,529	16,085	45,000	53,000	65,000
20-24	21	57,099	17,579	47,932	53,580	65,000

Table 2.4.2 Continued

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Forensics						
Total	30	50,247	10,637	42,000	50,400	60,000
Chem info services						
Total	15	57,673	17,875	43,000	54,000	75,000
Consulting						
Total	25	62,456	16,352	50,000	59,000	75,000
Other						
Total	62	62,677	21,970	46,200	60,000	75,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.4.3

SALARIES of PhD CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1989 ACS Salary Survey

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-manufacturing						
Total	168	58,609	21,287	43,870	53,113	70,000
5-9	20	42,230	5,705	39,850	42,200	45,750
10-14	28	51,645	11,030	42,000	50,800	59,000
15-19	41	55,176	13,878	47,600	53,000	61,000
20-24	29	65,817	21,374	52,000	60,000	76,800
25-29	23	58,760	25,875	34,000	60,000	75,000
Basic chemicals						
Total	204	65,089	20,796	50,650	60,000	74,000
5-9	18	44,337	2,599	43,000	44,880	46,500
10-14	36	48,801	4,892	44,500	48,890	51,900
15-19	36	60,344	12,486	50,760	57,350	70,500
20-24	34	68,349	12,501	59,600	68,143	73,900
25-29	36	76,584	22,662	63,500	72,040	79,800
30-34	19	74,997	25,304	57,011	69,000	84,000
35-39	15	86,125	16,074	70,680	85,000	98,000
Specialty chemicals						
Total	374	61,998	20,687	48,000	57,500	70,000
5-9	39	45,290	4,887	42,925	45,000	48,000
10-14	66	49,945	7,003	45,000	48,000	54,000
15-19	60	57,425	13,227	49,750	55,000	60,000
20-24	65	63,270	14,212	55,000	62,500	70,000
25-29	50	67,707	18,306	55,000	62,750	77,712
30-34	45	73,073	22,001	63,000	73,380	82,300
35-39	31	81,644	38,295	61,000	69,000	87,000
40 or more	18	75,674	19,183	65,200	70,075	88,000
Agricultural chemicals						
Total	100	58,184	18,827	46,100	51,878	64,000
10-14	28	47,422	5,063	44,000	47,250	51,000
15-19	18	53,626	7,638	48,000	52,750	58,400
20-24	22	63,779	20,332	50,200	58,600	70,000
Biochemical products						
Total	69	56,847	27,003	45,000	50,000	60,000
10-14	19	47,816	6,986	42,000	48,000	51,900
15-19	15	50,780	22,869	41,200	48,000	53,600
20-24	17	58,960	10,962	51,000	59,400	66,000
Coatings						
Total	64	57,491	16,363	45,000	55,000	65,500
Electronics						
Total	106	60,238	16,688	49,500	57,650	66,000
10-14	28	51,574	9,848	45,000	51,500	57,900
15-19	20	58,334	7,663	54,500	56,444	61,000
20-24	18	65,555	11,226	60,000	63,000	70,000
25-29	16	72,528	22,124	58,340	71,500	84,100

Table 2.4.3 Continued

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Food						
Total	83	62,078	19,279	50,000	58,600	72,000
15-19	15	57,328	8,600	51,000	56,400	61,500
25-29	19	64,950	25,327	51,400	60,000	65,388
Glass						
Total	21	56,758	17,205	44,250	52,920	64,000
Metals						
Total	32	57,287	13,769	48,000	55,000	62,100
Paper						
Total	34	61,255	21,963	45,000	60,000	67,000
Petroleum						
Total	116	69,476	21,660	51,750	67,500	81,950
10-14	23	52,252	8,018	46,000	51,500	56,000
15-19	20	61,015	11,593	51,100	61,780	68,100
20-24	17	79,617	15,981	66,000	73,000	95,640
25-29	17	81,309	12,826	75,000	78,400	84,300
30-34	15	78,667	14,327	73,740	79,000	86,200
Pharmaceuticals						
Total	454	63,968	21,066	49,585	58,732	74,200
5-9	44	45,541	4,065	42,570	45,250	48,200
10-14	111	50,726	8,856	45,000	50,400	55,170
15-19	80	61,121	16,378	51,328	57,450	67,500
20-24	72	69,376	16,455	56,400	68,280	78,650
25-29	60	77,924	21,616	62,150	75,000	85,100
30-34	33	70,677	24,163	59,520	69,960	78,000
35-39	42	86,106	26,703	71,800	80,000	95,000
Plastics						
Total	158	66,004	23,458	51,000	60,432	73,200
10-14	30	49,671	6,138	46,000	49,450	53,000
15-19	23	58,328	8,907	50,280	59,000	65,000
20-24	27	70,061	15,295	57,000	68,000	85,500
25-29	23	85,021	36,578	65,000	72,300	90,000
30-34	17	66,060	20,699	51,700	60,000	72,312
35-39	16	78,293	16,222	66,050	78,000	88,450
Rubber						
Total	28	60,829	14,071	52,040	59,250	67,295
Soaps						
Total	32	58,602	17,538	46,200	55,500	70,400
Other manufactures						
Total	306	61,306	18,321	48,000	57,950	70,000
5-9	24	45,556	4,449	42,670	45,500	47,030
10-14	43	49,252	8,919	43,600	48,000	54,800
15-19	47	54,896	10,444	47,000	55,000	61,000
20-24	62	64,929	18,735	52,000	62,040	74,000
25-29	48	65,332	16,034	54,560	65,400	75,000
30-34	27	64,289	17,107	49,250	64,000	82,000
35-39	41	72,684	21,319	59,200	66,500	80,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.4.4

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by GEOGRAPHIC REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	261	64,559	21,744	49,500	60,000	75,000
5-9	24	43,171	4,462	41,500	43,400	46,000
10-14	47	51,399	10,027	44,980	50,257	54,000
15-19	55	64,327	18,988	54,000	60,000	68,000
20-24	53	64,463	15,302	56,700	62,000	70,000
25-29	34	73,721	17,675	62,655	76,450	82,300
30-34	21	69,227	25,694	53,000	62,500	76,000
35-39	20	96,497	22,507	84,500	90,000	103,620
Mountain						
Total	48	54,996	15,889	42,000	51,416	65,250
West North Central						
Total	127	57,901	19,494	45,400	53,084	66,800
10-14	34	50,873	9,118	45,810	50,000	54,000
15-19	24	52,306	12,794	42,750	49,950	56,500
20-24	20	67,684	18,788	54,070	62,790	73,550
25-29	21	59,066	20,571	45,000	55,000	70,832
West South Central						
Total	173	61,200	16,151	47,600	60,000	72,225
5-9	20	44,652	3,971	40,350	44,400	47,850
10-14	29	48,035	6,466	44,940	47,000	50,000
15-19	33	60,607	11,370	52,000	61,100	71,000
20-24	29	68,702	9,632	61,800	69,000	75,000
25-29	26	72,208	18,665	61,500	70,700	77,000
30-34	21	69,445	20,654	55,000	73,200	82,000
East North Central						
Total	477	61,372	21,831	47,100	56,400	70,000
5-9	39	43,690	3,191	41,000	44,000	45,500
10-14	110	48,952	7,479	44,000	48,000	52,920
15-19	81	55,676	9,855	49,600	55,000	60,000
20-24	77	65,812	18,154	54,540	65,000	74,000
25-29	70	74,794	28,541	60,000	68,634	84,000
30-34	44	66,354	22,483	56,506	63,000	76,000
35-39	42	82,513	28,893	62,660	76,500	95,000
East South Central						
Total	55	61,028	22,292	49,000	56,200	67,000

Table 2.4.4 Continued

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Middle Atlantic						
Total	671	63,863	20,642	49,500	60,000	73,800
5-9	62	45,793	3,951	43,000	45,750	47,500
10-14	133	50,567	7,318	45,000	50,000	55,000
15-19	89	58,716	12,622	52,000	57,400	64,000
20-24	121	67,862	18,096	56,700	64,400	77,000
25-29	99	71,302	26,053	59,000	67,000	78,800
30-34	62	74,374	22,424	59,700	70,500	82,500
35-39	69	78,676	21,692	66,000	76,000	85,000
40 or more	36	76,435	19,810	58,850	74,000	94,125
South Atlantic						
Total	344	62,679	21,645	48,636	58,400	71,500
5-9	32	44,854	4,812	42,000	45,000	47,650
10-14	54	47,698	7,487	42,500	48,290	53,300
15-19	60	54,673	9,607	48,550	53,150	58,900
20-24	47	65,097	19,232	55,000	60,564	71,500
25-29	58	73,201	18,488	60,000	70,050	80,000
30-34	28	66,717	17,843	54,500	64,550	75,000
35-39	44	81,985	33,033	61,250	71,250	97,000
40 or more	21	70,929	20,546	55,000	66,900	79,284
New England						
Total	179	60,673	16,606	49,000	56,888	69,000
5-9	18	46,426	4,863	45,000	46,350	50,000
10-14	37	53,438	7,762	48,000	52,000	58,000
15-19	39	57,794	14,920	48,000	55,000	60,500
20-24	34	66,835	13,206	56,000	67,000	75,000
25-29	20	67,355	13,886	54,750	68,658	77,825

Note: Cells with fewer than 15 cases have been suppressed.

Table 2.4.5

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	923	53,582	12,851	45,000	50,880	60,000
5-9	142	43,846	4,017	41,500	44,000	46,000
10-14	226	47,764	6,845	43,320	47,000	51,000
15-19	158	51,783	9,650	46,500	51,240	56,200
20-24	105	58,184	12,615	51,000	58,000	68,000
25-29	97	58,996	13,659	51,400	59,700	66,000
30-34	86	62,936	12,395	54,200	63,550	72,000
35-39	78	64,242	13,778	55,324	62,560	71,500
40 or more	30	65,266	23,013	53,688	59,850	72,600
Supervisors						
Total	1398	67,882	22,651	52,500	62,940	78,000
5-9	75	46,196	5,100	43,140	46,545	49,281
10-14	233	52,108	8,313	47,100	51,800	56,000
15-19	245	61,492	14,272	53,000	59,500	68,000
20-24	288	69,424	17,304	58,052	67,693	78,000
25-29	245	76,274	24,441	62,500	72,300	84,000
30-34	119	76,114	25,795	60,000	72,000	86,200
35-39	127	88,628	28,545	70,000	84,000	100,000
40 or more	66	79,290	25,933	63,120	74,275	95,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 3.1.1

SALARIES of GOVERNMENTAL CHEMISTS employed FULL-TIME
by DEGREE and YEARS SINCE BS
1989 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	213	36,926	12,176	28,300	35,000	45,000
2-4	21	23,438	6,108	19,600	22,800	27,000
5-9	39	29,113	5,872	24,000	28,000	35,000
10-14	35	34,581	8,540	29,814	33,300	38,000
15-19	26	39,241	7,023	35,000	38,732	45,000
20-24	22	41,230	11,319	31,000	41,200	49,350
25-29	22	45,686	10,815	36,000	45,117	52,089
30-34	20	42,158	10,581	35,681	38,875	51,150
MS						
Total	146	40,866	12,861	31,175	38,020	48,000
5-9	27	31,223	6,219	25,870	32,000	34,600
15-19	27	39,945	9,973	33,500	38,000	44,832
20-24	20	41,016	14,760	30,500	42,000	50,600
25-29	19	48,812	14,890	39,400	49,700	59,000
30-34	15	48,942	14,354	36,000	47,000	67,000
35-39	16	46,779	11,609	38,746	46,000	55,190
PhD						
Total	404	54,251	13,558	44,100	53,400	63,350
5-9	21	38,339	8,286	31,012	36,000	43,500
10-14	54	45,151	10,539	38,137	44,867	51,000
15-19	48	47,732	9,748	40,152	48,150	54,000
20-24	70	53,359	10,380	46,605	52,528	60,000
25-29	64	57,349	10,794	49,174	57,712	65,223
30-34	58	60,237	14,224	52,000	61,753	72,000
35-39	52	60,310	12,949	53,000	61,000	71,000
40 or more	37	63,446	14,794	54,000	64,000	74,300

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.1.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by CONTRACT STATUS and RANK
1989 ACS Salary Survey

CONTACT STATUS & ACADEMIC RANK	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
9-10 month						
Full professor	606	49,938	13,983	40,000	48,000	56,600
Assoc professor	205	36,814	7,152	32,000	35,800	40,500
Asst professor	181	31,086	5,348	27,250	30,000	33,500
Instructor	25	28,638	6,780	24,000	28,500	30,000
11-12 month						
Full professor	206	69,932	21,870	57,000	67,000	80,000
Assoc professor	95	49,555	14,390	40,500	48,500	55,000
Asst professor	68	38,948	7,897	34,550	38,750	42,750
Instructor	46	40,284	13,510	32,000	40,000	46,000
Research assoc	72	34,266	10,147	27,500	31,450	41,250

Note: Cells with fewer than 15 cases have been supprssed.

Table 4.2.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and YEARS SINCE BS - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor						
Total	603	49,999	13,986	40,000	48,000	56,800
15-19	28	46,282	12,244	38,550	47,900	51,058
20-24	102	48,056	12,673	40,000	46,035	54,000
25-29	167	46,803	12,650	39,127	45,000	53,000
30-34	130	50,920	12,296	42,000	50,050	59,670
35-39	111	50,167	13,742	41,000	50,000	55,000
40 or more	60	61,195	18,387	45,000	57,000	77,075
Assoc professor						
Total	205	36,814	7,152	32,000	35,800	40,500
10-14	23	38,248	5,368	34,000	37,000	42,900
15-19	54	36,686	8,230	32,150	35,200	40,004
20-24	52	36,094	6,510	30,344	35,475	39,703
25-29	42	36,037	7,583	31,000	34,000	40,000
30-34	20	37,113	6,507	31,900	38,000	42,491
Asst professor						
Total	181	31,086	5,348	27,250	30,000	33,500
5-9	35	31,241	4,353	29,000	30,000	33,500
10-14	97	31,803	5,353	28,000	32,000	34,100
15-19	32	29,631	5,893	24,977	29,000	32,250
Instructor						
Total	25	28,638	6,780	24,000	28,500	30,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.2.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and YEARS SINCE BS - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor						
Total	205	69,956	21,920	57,000	67,000	80,000
20-24	20	76,416	39,698	56,650	64,750	87,000
25-29	53	63,225	15,672	56,000	62,000	70,000
30-34	59	69,093	14,844	62,300	68,000	79,970
35-39	37	72,955	23,276	58,070	71,000	85,000
40 or more	31	76,649	23,918	60,000	72,500	98,000
Assoc professor						
Total	93	48,900	12,499	40,555	48,500	54,234
15-19	25	49,862	11,797	42,000	49,000	56,000
20-24	19	51,192	16,613	39,900	50,000	58,000
25-29	23	46,648	11,134	40,000	46,000	52,100
Asst professor						
Total	68	38,948	7,897	34,550	38,750	42,750
10-14	27	38,713	5,458	36,000	39,050	40,000
15-19	18	37,456	9,141	29,800	36,000	45,000
Instructor						
Total	45	40,257	13,661	32,000	40,000	46,000
Research assoc						
Total	72	34,266	10,147	27,500	31,450	41,250
10-14	16	31,116	8,611	25,750	30,950	38,250
15-19	22	34,581	9,654	29,600	31,875	43,151

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.3.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and ACADEMIC WORK FUNCTION - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & WORK FUNCTION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching						
Full professor	369	44,794	10,640	37,150	43,326	51,000
Assoc professor	139	35,778	6,814	30,900	35,000	40,000
Asst professor	106	29,203	5,116	25,700	28,250	32,000
Instructor	24	28,915	6,780	24,000	28,500	30,000
Research						
Full professor	88	61,009	17,301	49,450	57,500	70,750
Assoc professor	20	37,067	5,329	32,500	37,000	40,000
Asst professor	44	34,272	4,097	31,821	33,000	35,450

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.3.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and ACADEMIC WORK FUNCTION - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & WORK FUNCTION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching						
Full professor	44	54,821	16,177	42,356	56,500	63,000
Assoc professor	28	41,390	8,975	32,044	40,188	48,150
Asst professor	18	32,374	7,013	27,000	30,500	39,050
Research						
Full professor	53	73,705	16,922	63,900	70,000	79,000
Assoc professor	43	52,156	14,095	43,000	50,000	56,400
Asst professor	40	41,208	5,699	37,100	39,550	45,600
Instructor	17	38,266	7,852	32,300	34,000	42,000
Research assoc	61	33,648	10,402	26,800	31,000	40,500
Administration						
Full professor	57	72,747	15,926	62,340	70,000	86,500

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.4.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and WORK SPECIALTY - 9 or 10 month Contract
1989 ACS Salary Survey

ACADEMIC RANK & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Full professor	52	51,805	14,184	40,650	48,150	62,918
Assoc professor	26	35,943	5,458	33,000	35,000	39,000
Asst professor	19	32,060	5,797	28,000	32,000	34,000
General chemistry						
Full professor	52	43,950	10,626	36,739	43,600	51,250
Assoc professor	19	35,686	6,982	29,000	35,000	41,000
Analytical chemistry						
Full professor	58	47,783	14,557	39,305	45,500	52,250
Assoc professor	33	36,553	5,184	32,850	35,700	40,400
Asst professor	26	28,602	3,242	27,000	28,083	30,000
Inorganic chemistry						
Full professor	76	48,150	13,247	39,750	47,900	53,750
Assoc professor	24	38,827	7,201	34,492	38,550	43,000
Asst professor	38	31,405	5,033	28,000	31,822	35,000
Organic chemistry						
Full professor	168	50,789	13,885	40,000	48,300	60,000
Assoc professor	44	36,119	8,771	30,576	35,282	40,000
Asst professor	43	29,956	4,052	27,250	30,000	33,000
Physical chemistry						
Full professor	134	50,791	12,957	42,000	49,514	56,800
Assoc professor	27	36,397	7,036	31,000	34,700	40,000
Asst professor	21	30,095	3,305	28,080	30,000	33,000
Polymer chemistry						
Full professor	17	57,021	17,102	44,600	55,400	70,000
Other chemical science						
Full professor	43	51,340	16,738	40,000	50,000	61,000
Assoc professor	20	37,698	8,465	32,951	36,000	42,500
Asst professor	20	34,762	5,640	30,000	34,250	39,500

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.4.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and WORK SPECIALTY - 11 or 12 month Contract
1989 ACS Salary Survey

ACADEMIC RANK & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Full professor	53	76,186	17,699	67,000	73,000	82,000
Assoc professor	35	49,693	12,714	42,000	49,000	53,700
Asst professor	18	39,556	5,609	36,000	39,750	43,500
Research assoc	19	32,036	8,121	26,150	30,000	40,000
Medicinal Pharmaceutical						
Full professor	23	75,747	36,207	60,000	65,000	82,616
Organic chemistry						
Full professor	23	62,132	22,162	47,500	61,000	68,000
Physical chemistry						
Full professor	17	63,646	24,678	41,000	63,000	78,000
Other chemical science						
Full professor	65	65,527	16,186	56,000	63,900	76,000
Assoc professor	29	47,414	9,516	40,555	46,000	54,000
Asst professor	26	39,988	8,510	37,000	39,250	45,000
Instructor	19	44,337	16,877	33,495	40,000	55,000
Research assoc	34	34,124	11,714	27,000	30,950	42,000
Other non-chem						
Full professor	25	74,230	19,317	62,340	70,000	87,500

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.5.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TENURE - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & TENURE STATUS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Tenured						
Full professor	590	50,129	13,903	40,296	48,000	56,840
Assoc professor	180	36,927	7,043	32,000	35,900	40,703
Asst professor	21	28,816	4,159	25,700	27,700	30,000
Not Tenured						
Assoc professor	24	36,123	8,150	29,735	35,000	41,250
Asst professor	159	31,374	5,440	28,000	31,000	33,750
Instructor	21	27,065	4,236	23,000	26,000	29,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.5.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TENURE - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & TENURE STATUS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Tenured						
Full professor	194	69,912	22,226	57,100	67,000	80,000
Assoc professor	70	49,108	12,051	41,363	48,400	54,000
Not tenured						
Assoc professor	25	50,806	19,782	39,000	49,072	60,400
Asst professor	62	39,240	7,677	35,000	39,000	42,000
Instructor	42	39,975	13,951	30,124	39,500	46,000
Research assoc	65	34,313	10,461	27,000	31,500	42,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.6.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and INSTITUTIONAL CONTROL - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & INST CONTROL	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
Full professor	404	51,666	13,210	42,000	50,000	57,350
Assoc professor	141	36,971	6,789	32,150	36,000	40,500
Asst professor	118	31,972	5,202	29,000	31,250	33,750
Instructor	22	29,209	6,947	24,000	28,500	30,000
Private						
Full professor	202	46,482	14,852	36,000	44,000	55,000
Assoc professor	64	36,469	7,939	30,150	35,350	40,835
Asst professor	63	29,426	5,259	25,700	28,000	33,400

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.6.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and INSTITUTIONAL CONTROL - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & INST CONTROL	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
Full professor	146	70,470	15,916	60,000	67,200	80,000
Assoc professor	68	50,190	11,817	41,432	48,850	54,617
Asst professor	43	39,808	5,512	37,000	39,500	43,500
Instructor	31	42,574	15,080	33,400	41,100	54,000
Research assoc	52	34,724	10,360	29,500	33,000	41,250
Private						
Full professor	60	68,623	32,199	44,756	64,450	83,250
Assoc professor	26	48,595	19,724	32,088	45,500	56,000
Asst professor	25	37,468	10,832	29,800	35,000	41,000
Instructor	15	35,552	7,983	29,300	33,000	41,000
Research assoc	20	33,075	9,728	25,000	29,250	43,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.7.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TYPE OF INSTITUTION - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
AA-granting						
Full professor	20	45,769	8,862	39,550	43,600	50,000
BS-granting						
Full professor	177	40,780	8,574	35,500	40,000	46,000
Assoc professor	67	33,926	5,584	30,000	34,000	37,000
Asst professor	59	27,217	3,780	25,000	26,800	30,000
MS-granting						
Full professor	100	45,555	8,384	39,653	45,300	52,000
Assoc professor	28	35,364	6,049	30,612	33,500	39,277
Asst professor	26	28,621	2,924	27,000	28,540	31,500
PhD-granting						
Full professor	305	57,005	14,474	46,350	54,500	64,300
Assoc professor	95	39,510	7,497	33,500	38,964	44,000
Asst professor	93	34,366	4,640	31,000	33,000	37,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.7.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TYPE OF INSTITUTION - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS-granting						
Full professor	37	50,172	17,355	38,280	46,800	62,500
MS-granting						
Full professor	15	65,999	14,131	60,000	63,600	68,736
PhD-granting						
Full professor	118	73,011	16,662	62,000	70,000	82,500
Assoc professor	51	49,606	10,842	41,363	49,000	54,234
Asst professor	39	40,948	7,152	37,000	39,500	45,000
Instructor	35	40,540	11,178	33,000	40,000	47,500
Research assoc	60	35,050	10,713	26,475	31,700	43,076
Medical school						
Full professor	39	78,156	31,085	57,100	72,000	88,000
Assoc professor	26	56,107	18,534	46,000	52,050	57,500
Asst professor	17	41,429	5,955	38,000	40,000	48,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.8.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and SEX - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & SEX	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men						
Full professor	575	50,309	14,064	40,300	48,000	57,000
Assoc professor	175	37,165	7,121	32,000	36,055	41,200
Asst professor	146	31,759	5,361	28,000	31,000	34,000
Instructor	19	29,208	7,591	23,000	28,600	32,123
Women						
Full professor	30	43,423	10,293	37,000	42,993	50,200
Assoc professor	30	34,765	7,106	30,900	33,500	38,105
Asst professor	35	28,279	4,331	24,810	27,000	32,924

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.8.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and SEX - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & SEX	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men						
Full professor	193	70,617	22,084	57,900	67,500	81,000
Assoc professor	81	49,322	12,893	40,555	48,700	56,000
Asst professor	55	39,642	7,965	35,000	39,000	45,000
Instructor	36	40,741	13,701	31,062	40,000	46,000
Research assoc	62	34,445	9,970	28,000	31,750	42,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.9.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and GEOGRAPHIC REGION - 9 or 10 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & GEOGRAPHIC REGION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Full professor	83	55,447	16,942	46,000	52,968	57,000
Assoc professor	16	35,487	7,331	31,000	36,000	39,068
Asst professor	18	33,819	3,623	32,500	34,250	35,400
Mountain						
Full professor	40	47,982	14,396	36,750	45,000	56,000
West North Central						
Full professor	49	44,915	11,847	38,000	44,700	50,000
Assoc professor	20	33,167	4,241	30,378	32,176	36,093
Asst professor	17	28,665	4,121	25,100	30,000	32,000
West South Central						
Full professor	48	46,072	11,577	39,564	44,508	52,400
Assoc professor	15	36,485	7,114	31,160	36,000	37,200
Asst professor	21	32,137	6,241	28,000	30,500	35,000
East North Central						
Full professor	123	48,977	13,579	40,000	47,000	55,000
Assoc professor	37	37,850	8,855	32,000	35,300	42,000
Asst professor	37	31,288	5,963	27,000	30,000	33,500
East South Central						
Full professor	28	42,053	10,341	36,311	39,551	46,054
Assoc professor	16	31,447	2,330	30,126	31,250	32,951
Middle Atlantic						
Full professor	105	54,187	13,227	45,200	53,000	63,000
Assoc professor	35	39,351	7,263	35,000	39,400	44,000
Asst professor	36	30,731	4,229	27,650	30,000	32,750
South Atlantic						
Full professor	77	46,976	13,173	37,500	43,600	59,670
Assoc professor	35	37,454	6,938	32,000	37,000	40,906
Asst professor	25	30,851	5,836	26,800	30,000	32,924
New England						
Full professor	47	53,717	11,739	46,350	51,000	60,000
Assoc professor	17	40,756	4,410	38,260	41,265	43,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 4.9.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and GEOGRAPHIC REGION - 11 or 12 Month Contract
1989 ACS Salary Survey

ACADEMIC RANK & GEOGRAPHIC REGION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Full professor	20	69,745	17,515	60,000	64,200	80,500
West North Central						
Full professor	22	68,517	20,257	56,000	70,000	81,000
West South Central						
Full professor	20	61,937	18,622	47,150	61,500	72,500
East North Central						
Full professor	36	73,907	32,727	60,000	69,500	77,750
Assoc professor	19	48,517	11,432	41,522	46,000	56,400
East South Central						
Full professor	16	66,742	24,337	56,500	63,550	76,000
Middle Atlantic						
Full professor	37	72,343	20,004	61,000	67,000	87,095
Assoc professor	22	48,638	18,595	38,000	47,150	53,700
Asst professor	16	38,531	9,969	27,550	38,500	47,600
South Atlantic						
Full professor	36	74,051	17,002	61,850	71,750	84,500
Research assoc	15	34,898	10,289	26,800	30,000	40,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 5.1.1

STIPENDS of POSTDOCTORAL FELLOWS
by INSTITUTIONAL CONTROL and WORK SPECIALTY
1989 ACS Salary Survey

INST CONTROL & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	44	22,596	4,605	19,000	23,000	25,000
Public	26	22,678	3,918	20,000	22,500	25,000
Private	18	22,469	5,625	19,000	23,800	26,250
Chemistry						
Total	94	21,323	6,961	18,000	20,000	23,000
Public	67	21,856	7,876	18,600	21,000	24,000
Private	27	19,879	3,135	18,000	18,750	20,500

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.1.1

SALARIES of CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by DEGREE and YEARS SINCE BS
1989 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	574	55,375	38,877	35,100	47,675	63,500
2-4	79	31,747	5,054	28,300	32,500	34,500
5-9	104	38,210	8,140	32,400	38,150	42,500
10-14	61	45,295	10,922	39,400	44,500	49,000
15-19	37	52,490	13,029	45,000	52,200	58,000
20-24	35	60,403	22,123	49,200	58,000	74,000
25-29	34	81,678	111998	48,000	58,750	76,000
30-34	75	73,968	29,632	55,000	65,148	84,000
35-39	75	69,216	23,436	51,000	65,000	84,000
40 or more	62	74,383	46,402	50,000	64,250	89,250
MS						
Total	535	58,560	24,392	43,000	53,000	66,000
2-4	21	35,980	2,582	34,200	36,000	37,380
5-9	95	40,331	6,378	36,000	40,000	44,000
10-14	87	48,985	8,370	44,000	49,500	54,000
15-19	68	57,003	13,105	48,000	54,000	63,000
20-24	47	57,487	13,421	50,055	56,000	65,000
25-29	56	66,031	17,446	54,450	62,200	79,800
30-34	48	78,196	38,219	55,000	66,750	84,272
35-39	67	78,013	30,706	57,000	74,000	86,000
40 or more	46	70,106	28,567	53,500	65,000	84,000
PhD						
Total	632	70,095	25,556	52,000	64,740	81,000
5-9	73	47,743	4,406	45,000	48,000	50,000
10-14	105	52,983	9,174	47,500	51,500	57,324
15-19	98	64,016	15,834	54,000	60,000	71,800
20-24	93	75,150	23,572	60,300	73,000	85,000
25-29	95	80,726	20,003	66,000	76,000	93,000
30-34	89	81,221	22,837	64,000	76,000	94,000
35-39	47	97,329	34,540	73,500	92,000	108,000
40 or more	32	78,660	42,488	56,500	65,500	81,670

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.2.1

SALARIES of BS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	49	66,022	23,055	53,500	65,000	77,000
Applied research						
Total	138	45,414	13,971	33,900	44,000	54,000
2-4	26	32,365	5,023	29,400	32,900	35,000
5-9	26	37,579	9,783	32,260	36,575	40,300
30-34	19	55,482	11,690	45,400	53,500	60,000
35-39	19	60,093	15,811	50,000	55,860	66,300
General Mgt						
Total	90	82,347	45,374	52,200	74,500	100,000
30-34	16	105,496	39,291	79,000	96,000	137,500
40 or more	27	98,431	60,014	57,000	85,000	110,000
Marketing						
Total	84	52,436	21,755	37,000	46,560	62,300
5-9	15	40,665	7,388	35,000	41,400	45,000
35-39	16	68,049	30,938	46,500	65,500	82,702
Production						
Total	79	43,748	15,507	34,000	40,400	48,576
5-9	21	37,885	6,478	34,380	37,920	40,400
Consulting						
Total	37	42,682	16,463	30,000	38,000	50,100
Other						
Total	58	47,005	18,057	32,300	42,560	59,600
5-9	15	36,260	6,551	30,250	34,800	42,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.2.2

SALARIES of BS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	54	55,771	38,568	38,300	49,259	61,000
Mountain						
Total	17	58,210	23,403	44,000	52,000	72,000
West North Central						
Total	35	46,437	16,081	34,380	43,200	56,000
West South Central						
Total	57	60,078	29,636	35,400	50,000	84,000
East North Central						
Total	125	52,944	29,064	33,900	45,000	63,500
2-4	24	29,970	4,266	27,050	31,635	33,000
5-9	21	38,375	11,774	31,000	35,000	41,400
30-34	26	70,175	27,651	54,000	61,500	75,000
35-39	16	71,686	29,327	47,500	66,300	83,202
East South Central						
Total	27	47,173	18,844	33,000	42,600	56,000
Middle Atlantic						
Total	129	54,577	28,418	35,000	50,000	62,000
2-4	20	31,590	4,002	28,075	31,500	33,850
5-9	23	37,102	4,838	32,600	39,000	40,300
10-14	16	48,478	10,303	42,500	49,000	57,000
30-34	15	84,268	36,539	61,620	68,500	92,000
35-39	17	63,171	23,549	47,500	56,400	75,000
40 or more	15	74,411	43,732	48,100	65,000	90,000
South Atlantic						
Total	80	55,327	24,868	39,930	50,000	65,850
5-9	16	39,050	7,358	32,880	37,960	44,790
New England						
Total	44	55,212	23,506	38,500	48,624	63,868

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.2.3

SALARIES of BS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	281	43,919	16,586	32,250	40,080	52,000
2-4	65	31,678	4,857	28,500	32,300	34,200
5-9	60	36,358	8,399	31,200	35,000	41,100
10-14	30	42,562	9,190	35,100	43,450	45,900
30-34	28	56,528	11,857	48,475	54,800	63,942
35-39	35	64,343	22,223	46,800	58,000	75,000
40 or more	20	54,952	13,475	45,250	55,500	64,250
Supervisors						
Total	281	67,261	50,309	44,851	57,000	78,000
5-9	41	40,448	7,010	36,750	40,300	43,600
10-14	30	48,557	11,615	41,000	46,750	55,000
15-19	24	54,752	14,748	46,348	53,775	62,050
20-24	26	66,051	21,160	51,000	59,340	79,300
25-29	23	65,396	21,509	50,000	60,000	76,000
30-34	45	85,271	32,484	62,000	78,000	94,000
35-39	37	76,167	22,562	58,000	75,000	92,000
40 or more	40	86,015	53,518	54,000	71,500	97,500

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.3.1

SALARIES of MS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	51	74,190	31,812	54,312	65,000	88,000
Applied research						
Total	191	48,539	11,622	40,000	47,000	55,000
5-9	60	40,401	6,412	36,400	40,000	44,000
10-14	44	48,748	7,651	43,350	49,650	54,000
15-19	23	50,265	8,245	45,500	49,868	54,000
General Mgt						
Total	70	84,292	36,215	60,000	78,600	95,000
35-39	19	103,808	33,863	81,000	97,000	129,000
Marketing						
Total	48	58,458	18,113	46,500	58,000	70,000
Production						
Total	47	48,304	11,816	40,000	45,600	55,800
Consulting						
Total	35	50,802	12,589	41,000	50,500	60,000
Other						
Total	73	57,170	18,942	45,000	54,000	65,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.3.2

SALARIES of MS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	55	53,229	17,500	42,000	52,000	60,000
West North Central						
Total	35	59,609	21,557	44,580	55,000	74,100
West South Central						
Total	47	61,811	24,268	44,280	57,000	72,200
East North Central						
Total	91	53,445	19,910	38,000	48,000	60,000
5-9	21	37,679	4,520	35,000	37,800	40,000
East South Central						
Total	21	56,446	15,769	46,200	55,600	70,000
Middle Atlantic						
Total	144	62,062	26,584	44,728	56,500	72,000
5-9	22	40,589	6,861	36,200	40,950	44,000
10-14	23	51,588	10,503	44,000	50,000	60,000
15-19	15	56,603	12,677	48,880	54,000	63,000
20-24	15	57,080	12,167	50,055	52,600	59,000
35-39	23	83,620	33,636	63,000	80,500	90,000
40 or more	17	77,382	29,343	60,000	70,000	85,000
South Atlantic						
Total	75	55,413	19,770	42,732	53,000	62,000
15-19	15	56,954	11,342	48,000	53,000	63,000
New England						
Total	47	66,297	39,468	42,000	50,400	70,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.3.3

SALARIES of MS CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	266	48,616	12,759	40,000	46,870	55,000
2-4	16	36,075	2,762	34,100	35,750	38,000
5-9	63	39,407	6,042	35,000	40,000	43,000
10-14	53	47,754	7,842	44,000	47,200	52,000
15-19	36	50,751	7,574	45,500	50,750	54,400
20-24	26	50,468	9,069	46,740	51,500	56,000
25-29	15	56,652	13,427	46,500	56,400	64,920
30-34	13	50,731	12,148	41,000	48,800	55,400
35-39	24	62,036	14,927	50,250	62,300	69,000
40 or more	20	60,190	20,391	49,500	57,350	63,500
Supervisors						
Total	257	69,231	28,937	50,280	62,400	81,000
2-4	5	35,676	2,144	36,000	36,000	37,000
5-9	30	42,394	6,846	38,000	41,000	47,500
10-14	32	51,056	9,166	44,725	54,000	55,900
15-19	31	64,328	14,633	52,000	63,000	75,480
20-24	21	66,178	12,965	59,000	69,300	76,000
25-29	39	69,281	17,877	55,000	67,600	82,700
30-34	33	90,633	39,733	65,000	80,000	96,000
35-39	43	86,930	33,650	60,000	80,500	100,000
40 or more	23	82,329	29,462	65,000	72,000	90,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.4.1

SALARIES of PhD CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by WORK FUNCTION and YEARS SINCE BS
1989 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	133	82,867	20,734	70,000	80,000	94,000
15-19	25	72,538	13,992	64,000	73,000	78,700
20-24	26	83,619	14,278	74,900	80,760	92,500
25-29	33	86,092	18,628	73,000	84,000	99,000
30-34	19	86,500	24,367	64,000	84,500	94,000
35-39	16	99,063	28,641	81,500	100,000	120,500
Basic research						
Total	27	60,098	17,475	47,000	53,500	70,000
Applied research						
Total	307	60,384	15,523	49,500	56,305	68,000
5-9	60	47,555	3,855	45,000	48,075	50,050
10-14	64	51,951	7,284	48,000	51,000	56,293
15-19	53	57,907	9,176	52,300	57,360	62,184
20-24	39	63,254	11,874	53,496	64,000	71,000
25-29	32	72,813	15,806	65,200	70,868	78,000
30-34	41	75,005	17,547	61,000	72,000	85,000
General Mgt						
Total	50	107,431	44,339	75,000	93,950	125,000
Marketing						
Total	24	70,046	17,216	53,290	72,500	82,000
Consulting						
Total	28	70,426	22,491	51,300	69,980	84,000
Other						
Total	45	65,726	24,999	53,000	61,000	69,200

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.4.2

SALARIES of PhD CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by REGION and YEARS SINCE BS
1989 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	67	66,708	19,240	51,100	62,160	77,000
10-14	15	56,537	13,229	46,000	54,000	62,160
Mountain						
Total	15	61,961	15,047	50,000	60,000	76,800
West North Central						
Total	29	61,845	18,996	46,740	55,000	77,200
West South Central						
Total	83	74,377	24,920	55,000	70,000	85,000
20-24	16	74,900	21,147	64,150	78,300	85,650
25-29	17	89,699	23,692	73,500	83,500	102,000
East North Central						
Total	103	64,265	22,469	50,000	58,700	72,000
10-14	23	50,979	8,631	46,000	51,500	54,500
15-19	23	58,548	11,501	50,000	58,700	63,100
30-34	16	74,139	20,565	57,650	72,500	81,500
Middle Atlantic						
Total	189	72,663	27,086	53,600	67,000	84,792
5-9	26	47,919	3,650	46,000	47,850	50,100
10-14	31	54,848	7,535	49,200	53,700	61,000
15-19	26	65,915	12,186	55,500	66,250	75,000
20-24	26	83,876	29,768	69,000	77,190	92,000
25-29	28	77,966	19,239	65,100	72,000	91,500
30-34	23	89,678	17,482	75,000	89,000	103,000
35-39	16	109,688	45,850	77,250	100,000	129,500
South Atlantic						
Total	80	70,059	32,565	50,250	58,250	82,000
New England						
Total	47	78,880	23,004	65,000	75,000	86,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 6.4.3

SALARIES of PhD CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1989 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	274	58,728	14,854	48,500	55,000	66,100
5-9	56	47,450	4,640	44,700	47,850	50,000
10-14	64	50,366	7,693	45,150	49,950	53,650
15-19	35	59,114	10,794	50,128	58,500	66,000
20-24	26	63,992	12,208	55,860	64,001	72,000
25-29	28	69,531	14,944	61,500	67,620	75,000
30-34	36	69,578	16,206	57,900	67,150	78,000
40 or more	17	65,564	19,074	54,000	60,002	75,000
Supervisors						
Total	356	78,790	28,547	60,000	74,950	90,750
5-9	17	48,708	3,472	46,740	48,500	50,500
10-14	41	57,069	9,877	51,500	55,000	62,160
15-19	63	66,740	17,528	55,000	63,000	75,000
20-24	66	79,564	25,681	64,800	77,050	88,800
25-29	66	85,400	20,232	72,000	83,450	98,000
30-34	53	89,129	23,414	72,000	85,000	101,500
35-39	35	104,649	36,438	81,000	93,500	122,000
40 or more	15	93,503	56,010	65,000	70,000	93,000

Note: Cells with fewer than 15 cases have been suppressed.

Table 7.1.1

EMPLOYMENT STATUS OF ALL RESPONDENTS
by WORK SPECIALTY
1989 Survey of ACS Members

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Chemical engineering	650	12	4	10	11	2	689
Row Percent	94.3%	1.7%	.6%	1.5%	1.6%	.3%	100.0%
Column Percent	7.0%	7.7%	2.1%	9.1%	9.5%	15.4%	6.9%
Biochemistry	454	3	49	3	2	2	513
Row Percent	88.5%	.6%	9.6%	.6%	.4%	.4%	100.0%
Column Percent	4.9%	1.9%	25.1%	2.7%	1.7%	15.4%	5.2%
Biotechnology	191	2	4	1	3	0	201
Row Percent	95.0%	1.0%	2.0%	.5%	1.5%	.0%	100.0%
Column Percent	2.0%	1.3%	2.1%	.9%	2.6%	.0%	2.0%
General chemistry	422	15	0	2	5	0	444
Row Percent	95.0%	3.4%	.0%	.5%	1.1%	.0%	100.0%
Column Percent	4.5%	9.7%	.0%	1.8%	4.3%	.0%	4.5%
Agricultural chemistry	281	7	5	2	4	0	299
Row Percent	94.0%	2.3%	1.7%	.7%	1.3%	.0%	100.0%
Column Percent	3.0%	4.5%	2.6%	1.8%	3.4%	.0%	3.0%
Analytical chemistry	1581	15	13	14	12	1	1636
Row Percent	96.6%	.9%	.8%	.9%	.7%	.1%	100.0%
Column Percent	16.9%	9.7%	6.7%	12.7%	10.3%	7.7%	16.5%
Clinical chemistry	113	0	3	2	2	1	121
Row Percent	93.4%	.0%	2.5%	1.7%	1.7%	.8%	100.0%
Column Percent	1.2%	.0%	1.5%	1.8%	1.7%	7.7%	1.2%
Environmental chemistry	648	12	3	12	5	0	680
Row Percent	95.3%	1.8%	.4%	1.8%	.7%	.0%	100.0%
Column Percent	6.9%	7.7%	1.5%	10.9%	4.3%	.0%	6.9%
Inorganic chemistry	342	6	23	3	1	0	375
Row Percent	91.2%	1.6%	6.1%	.8%	.3%	.0%	100.0%
Column Percent	3.7%	3.9%	11.8%	2.7%	.9%	.0%	3.8%
Materials science	377	17	3	6	5	0	408
Row Percent	92.4%	4.2%	.7%	1.5%	1.2%	.0%	100.0%
Column Percent	4.0%	11.0%	1.5%	5.5%	4.3%	.0%	4.1%

Table 7.1.1 Continued

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Medicinal-Pharmaceutical	459	2	13	1	5	0	480
Row Percent	95.6%	.4%	2.7%	.2%	1.0%	.0%	100.0%
Column Percent	4.9%	1.3%	6.7%	.9%	4.3%	.0%	4.8%
Organic chemistry	1033	12	25	12	13	1	1096
Row Percent	94.3%	1.1%	2.3%	1.1%	1.2%	.1%	100.0%
Column Percent	11.1%	7.7%	12.8%	10.9%	11.2%	7.7%	11.0%
Physical chemistry	550	4	33	5	3	1	596
Row Percent	92.3%	.7%	5.5%	.8%	.5%	.2%	100.0%
Column Percent	5.9%	2.6%	16.9%	4.5%	2.6%	7.7%	6.0%
Polymer chemistry	858	12	6	8	8	0	892
Row Percent	96.2%	1.3%	.7%	.9%	.9%	.0%	100.0%
Column Percent	9.2%	7.7%	3.1%	7.3%	6.9%	.0%	9.0%
Other chemical science	278	5	2	4	5	0	294
Row Percent	94.6%	1.7%	.7%	1.4%	1.7%	.0%	100.0%
Column Percent	3.0%	3.2%	1.0%	3.6%	4.3%	.0%	3.0%
Business Administration	309	8	0	3	6	1	327
Row Percent	94.5%	2.4%	.0%	.9%	1.8%	.3%	100.0%
Column Percent	3.3%	5.2%	.0%	2.7%	5.2%	7.7%	3.3%
Other non-chem	562	15	5	14	6	1	603
Row Percent	93.2%	2.5%	.8%	2.3%	1.0%	.2%	100.0%
Column Percent	6.0%	9.7%	2.6%	12.7%	5.2%	7.7%	6.1%
No Answer	230	8	4	8	20	3	273
Row Percent	84.2%	2.9%	1.5%	2.9%	7.3%	1.1%	100.0%
Column Percent	2.5%	5.2%	2.1%	7.3%	17.2%	23.1%	2.8%
Total	9338	155	195	110	116	13	9927
Row Percent	94.1%	1.6%	2.0%	1.1%	1.2%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
BS	1953	28	2	31	31	2	2047
Row Percent	95.4%	1.4%	.1%	1.5%	1.5%	.1%	100.0%
Column Percent	23.9%	21.7%	1.1%	35.6%	38.8%	28.6%	23.6%
MS	1440	27	1	16	20	2	1506
Row Percent	95.6%	1.8%	.1%	1.1%	1.3%	.1%	100.0%
Column Percent	17.6%	20.9%	.5%	18.4%	25.0%	28.6%	17.4%
PhD	4720	72	181	39	29	3	5044
Row Percent	93.6%	1.4%	3.6%	.8%	.6%	.1%	100.0%
Column Percent	57.7%	55.8%	97.8%	44.8%	36.3%	42.9%	58.2%
No Answer	67	2	1	1	0	0	71
Row Percent	94.4%	2.8%	1.4%	1.4%	.0%	.0%	100.0%
Column Percent	.8%	1.6%	.5%	1.1%	.0%	.0%	.8%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.2

EMPLOYMENT STATUS OF MEN CHEMISTS
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
BS	1401	14	1	25	19	2	1462
Row Percent	95.8%	1.0%	.1%	1.7%	1.3%	.1%	100.0%
Column Percent	20.7%	18.9%	.7%	34.7%	38.0%	33.3%	20.6%
MS	1095	12	0	13	12	1	1133
Row Percent	96.6%	1.1%	.0%	1.1%	1.1%	.1%	100.0%
Column Percent	16.2%	16.2%	.0%	18.1%	24.0%	16.7%	15.9%
PhD	4222	46	141	34	19	3	4465
Row Percent	94.6%	1.0%	3.2%	.8%	.4%	.1%	100.0%
Column Percent	62.4%	62.2%	98.6%	47.2%	38.0%	50.0%	62.8%
No Answer	47	2	1	0	0	0	50
Row Percent	94.0%	4.0%	2.0%	.0%	.0%	.0%	100.0%
Column Percent	.7%	2.7%	.7%	.0%	.0%	.0%	.7%
Total	6765	74	143	72	50	6	7110
Row Percent	95.1%	1.0%	2.0%	1.0%	.7%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.3

EMPLOYMENT STATUS OF WOMEN CHEMISTS
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
BS	548	14	1	6	12	0	581
Row Percent	94.3%	2.4%	.2%	1.0%	2.1%	.0%	100.0%
Column Percent	39.6%	25.5%	2.4%	40.0%	41.4%	.0%	38.0%
MS	338	15	1	3	8	1	366
Row Percent	92.3%	4.1%	.3%	.8%	2.2%	.3%	100.0%
Column Percent	24.4%	27.3%	2.4%	20.0%	27.6%	100.0%	24.0%
PhD	479	26	40	5	9	0	559
Row Percent	85.7%	4.7%	7.2%	.9%	1.6%	.0%	100.0%
Column Percent	34.6%	47.3%	95.2%	33.3%	31.0%	.0%	36.6%
No Answer	20	0	0	1	0	0	21
Row Percent	95.2%	.0%	.0%	4.8%	.0%	.0%	100.0%
Column Percent	1.4%	.0%	.0%	6.7%	.0%	.0%	1.4%
Total	1385	55	42	15	29	1	1527
Row Percent	90.7%	3.6%	2.8%	1.0%	1.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.2.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by AGE
1989 Survey of ACS Members

AGE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
20-24	136	0	0	2	0	0	138
Row Percent	98.5%	.0%	.0%	1.5%	.0%	.0%	100.0%
Column Percent	1.7%	.0%	.0%	2.3%	.0%	.0%	1.6%
25-29	656	5	69	2	4	0	736
Row Percent	89.1%	.7%	9.4%	.3%	.5%	.0%	100.0%
Column Percent	8.0%	3.9%	37.3%	2.3%	5.0%	.0%	8.5%
30-34	1295	8	86	12	7	0	1408
Row Percent	92.0%	.6%	6.1%	.9%	.5%	.0%	100.0%
Column Percent	15.8%	6.2%	46.5%	13.8%	8.8%	.0%	16.2%
35-39	1297	17	20	13	9	2	1358
Row Percent	95.5%	1.3%	1.5%	1.0%	.7%	.1%	100.0%
Column Percent	15.9%	13.2%	10.8%	14.9%	11.3%	28.6%	15.7%
40-44	1111	11	5	9	4	1	1141
Row Percent	97.4%	1.0%	.4%	.8%	.4%	.1%	100.0%
Column Percent	13.6%	8.5%	2.7%	10.3%	5.0%	14.3%	13.2%
45-49	1196	16	3	14	2	1	1232
Row Percent	97.1%	1.3%	.2%	1.1%	.2%	.1%	100.0%
Column Percent	14.6%	12.4%	1.6%	16.1%	2.5%	14.3%	14.2%
40-54	951	15	1	11	4	0	982
Row Percent	96.8%	1.5%	.1%	1.1%	.4%	.0%	100.0%
Column Percent	11.6%	11.6%	.5%	12.6%	5.0%	.0%	11.3%
55-59	758	8	1	14	8	2	791
Row Percent	95.8%	1.0%	.1%	1.8%	1.0%	.3%	100.0%
Column Percent	9.3%	6.2%	.5%	16.1%	10.0%	28.6%	9.1%
60-64	520	21	0	7	24	0	572
Row Percent	90.9%	3.7%	.0%	1.2%	4.2%	.0%	100.0%
Column Percent	6.4%	16.3%	.0%	8.0%	30.0%	.0%	6.6%
65-69	178	23	0	2	15	1	219
Row Percent	81.3%	10.5%	.0%	.9%	6.8%	.5%	100.0%
Column Percent	2.2%	17.8%	.0%	2.3%	18.8%	14.3%	2.5%
70 or more	0	1	0	0	0	0	1
Row Percent	.0%	100.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.0%	.8%	.0%	.0%	.0%	.0%	.0%

Table 8.2.1 Continued

AGE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
No Answer	82	4	0	1	3	0	90
Row Percent	91.9%	4.4%	.0%	1.1%	3.3%	.0%	100.0%
Column Percent	1.0%	3.4%	.0%	1.1%	3.8%	0%	1.0%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.3.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by RACE-ETHNICITY
1989 Survey of ACS Members

RACE OR ETHNIC GROUP	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
American Indian	38	1	2	0	0	0	41
Row Percent	92.7%	2.4%	4.9%	.0%	.0%	.0%	100.0%
Column Percent	.5%	.8%	1.1%	.0%	.0%	.0%	.5%
Asian	460	7	27	4	2	0	500
Row Percent	92.0%	1.4%	5.4%	.8%	.4%	.0%	100.0%
Column Percent	5.6%	5.4%	14.6%	4.6%	2.5%	.0%	5.8%
Black	88	3	5	1	0	0	97
Row Percent	90.7%	3.1%	5.2%	1.0%	.0%	.0%	100.0%
Column Percent	1.1%	2.3%	2.7%	1.1%	.0%	.0%	1.1%
White	7319	115	146	80	75	6	7741
Row Percent	94.5%	1.5%	1.9%	1.0%	1.0%	.1%	100.0%
Column Percent	89.5%	89.1%	78.9%	92.0%	93.8%	85.7%	89.3%
Hispanic	138	2	1	2	1	0	144
Row Percent	95.8%	1.4%	.7%	1.4%	.7%	.0%	100.0%
Column Percent	1.7%	1.6%	.5%	2.3%	1.3%	.0%	1.7%
Other	47	1	4	0	1	1	54
Row Percent	87.0%	1.9%	7.4%	.0%	1.9%	1.9%	100.0%
Column Percent	.6%	.8%	2.2%	.0%	1.3%	14.3%	.6%
No Answer	90	0	0	0	1	0	91
Row Percent	98.9%	.0%	.0%	.0%	1.1%	.0%	100.0%
Column Percent	1.1%	.0%	.0%	.0%	1.3%	.0%	1.0%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.4.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by CITIZENSHIP
1989 Survey of ACS Members

CITIZENSHIP OR VISA STATUS	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Native	7129	110	140	77	73	7	7536
Row Percent	94.6%	1.5%	1.9%	1.0%	1.0%	.1%	100.0%
Column Percent	87.2%	85.3%	75.7%	88.5%	91.3%	100.0%	86.9%
Naturalized	641	11	7	4	3	0	666
Row Percent	96.2%	1.7%	1.1%	.6%	.5%	.0%	100.0%
Column Percent	7.8%	8.5%	3.8%	4.6%	3.8%	.0%	7.7%
Permanent resident	320	6	12	5	3	0	346
Row Percent	92.5%	1.7%	3.5%	1.4%	.9%	.0%	100.0%
Column Percent	3.9%	4.7%	6.5%	5.7%	3.8%	.0%	4.0%
Other visa	49	1	26	1	0	0	77
Row Percent	63.6%	1.3%	33.8%	1.3%	.0%	.0%	100.0%
Column Percent	.6%	.8%	14.1%	1.1%	.0%	.0%	.9%
No Answer	41	1	0	0	1	0	43
Row Percent	95.3%	2.3%	.0%	.0%	2.3%	.0%	100.0%
Column Percent	.5%	.8%	.0%	.0%	1.3%	.0%	.5%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by EMPLOYER
1989 Survey of ACS Members

EMPLOYER TYPE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Industry	4869	30	6	49	46	2	5002
Row Percent	97.3%	.6%	.1%	1.0%	.9%	.0%	100.0%
Column Percent	59.5%	23.3%	3.2%	56.3%	57.5%	28.6%	57.7%
Government	785	9	25	3	12	0	834
Row Percent	94.1%	1.1%	3.0%	.4%	1.4%	.0%	100.0%
Column Percent	9.6%	7.0%	13.5%	3.4%	15.0%	.0%	9.6%
Other Nonacademic	602	40	10	17	6	2	677
Row Percent	88.9%	5.9%	1.5%	2.5%	.9%	.3%	100.0%
Column Percent	7.4%	31.0%	5.4%	19.5%	7.5%	28.6%	7.8%
High School	102	3	1	0	2	0	108
Row Percent	94.4%	2.8%	.9%	.0%	1.9%	.0%	100.0%
Column Percent	1.2%	2.3%	.5%	.0%	2.5%	.0%	1.2%
College or University	1791	43	142	17	9	1	2003
Row Percent	89.4%	2.1%	7.1%	.8%	.4%	.0%	100.0%
Column Percent	21.9%	33.3%	76.8%	19.5%	11.3%	14.3%	23.1%
No Answer	31	4	1	1	5	2	44
Row Percent	70.5%	9.1%	2.3%	2.3%	11.4%	4.5%	100.0%
Column Percent	.4%	3.1%	.5%	1.1%	6.3%	28.6%	.5%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.2

EMPLOYMENT STATUS OF INDUSTRIAL CHEMISTS
by EMPLOYER
1989 Survey of ACS Members

EMPLOYER	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Non-manufacturing	488	6	0	8	3	0	505
Row Percent	96.6%	1.2%	.0%	1.6%	.6%	.0%	100.0%
Column Percent	10.0%	20.0%	.0%	16.3%	6.5%	.0%	10.1%
Basic chemicals	322	0	1	1	2	0	326
Row Percent	98.8%	.0%	.3%	.3%	.6%	.0%	100.0%
Column Percent	6.6%	.0%	16.7%	2.0%	4.3%	.0%	6.5%
Specialty chemicals	743	5	0	12	8	1	769
Row Percent	96.6%	.7%	.0%	1.6%	1.0%	.1%	100.0%
Column Percent	15.3%	16.7%	.0%	24.5%	17.4%	50.0%	15.4%
Agricultural chemicals	168	0	0	1	2	0	171
Row Percent	98.2%	.0%	.0%	.6%	1.2%	.0%	100.0%
Column Percent	3.5%	.0%	.0%	2.0%	4.3%	.0%	3.4%
Biochemical products	102	0	0	2	3	0	107
Row Percent	95.3%	.0%	.0%	1.9%	2.8%	.0%	100.0%
Column Percent	2.1%	.0%	.0%	4.1%	6.5%	.0%	2.1%
Coatings	188	2	0	1	3	0	194
Row Percent	96.9%	1.0%	.0%	.5%	1.5%	.0%	100.0%
Column Percent	3.9%	6.7%	.0%	2.0%	6.5%	.0%	3.9%
Electronics	221	3	0	1	0	0	225
Row Percent	98.2%	1.3%	.0%	.4%	.0%	.0%	100.0%
Column Percent	4.5%	10.0%	.0%	2.0%	.0%	.0%	4.5%
Food	191	0	1	1	2	1	196
Row Percent	97.4%	.0%	.5%	.5%	1.0%	.5%	100.0%
Column Percent	3.9%	.0%	16.7%	2.0%	4.3%	50.0%	3.9%
Glass	49	2	0	2	2	0	55
Row Percent	89.1%	3.6%	.0%	3.6%	3.6%	.0%	100.0%
Column Percent	1.0%	6.7%	.0%	4.1%	4.3%	.0%	1.1%
Metals	112	0	0	4	2	0	118
Row Percent	94.9%	.0%	.0%	3.4%	1.7%	.0%	100.0%
Column Percent	2.3%	.0%	.0%	8.2%	4.3%	.0%	2.4%

Table 8.5.2 Continued

EMPLOYER	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Paper	63	0	0	1	2	0	66
Row Percent	95.5%	.0%	.0%	1.5%	3.0%	.0%	100.0%
Column Percent	1.3%	.0%	.0%	2.0%	4.3%	.0%	1.3%
Petroleum	202	2	0	2	4	0	210
Row Percent	96.2%	1.0%	.0%	1.0%	1.9%	.0%	100.0%
Column Percent	4.1%	6.7%	.0%	4.1%	8.7%	.0%	4.2%
Pharmaceuticals	898	2	4	5	3	0	912
Row Percent	98.5%	.2%	.4%	.5%	.3%	.0%	100.0%
Column Percent	18.4%	6.7%	66.7%	10.2%	6.5%	.0%	18.2%
Plastics	300	1	0	1	6	0	308
Row Percent	97.4%	.3%	.0%	.3%	1.9%	.0%	100.0%
Column Percent	6.2%	3.3%	.0%	2.0%	13.0%	.0%	6.2%
Rubber	79	0	0	0	1	0	80
Row Percent	98.8%	.0%	.0%	.0%	1.3%	.0%	100.0%
Column Percent	1.6%	.0%	.0%	.0%	2.2%	.0%	1.6%
Soaps	71	1	0	0	1	0	73
Row Percent	97.3%	1.4%	.0%	.0%	1.4%	.0%	100.0%
Column Percent	1.5%	3.3%	.0%	.0%	2.2%	.0%	1.5%
Other manufactures	672	6	0	7	2	0	687
Row Percent	97.8%	.9%	.0%	1.0%	.3%	.0%	100.0%
Column Percent	13.8%	20.0%	.0%	14.3%	4.3%	.0%	13.7%
Total	4869	30	6	49	46	2	5002
Row Percent	97.3%	.6%	.1%	1.0%	.9%	.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.3

EMPLOYMENT STATUS OF ACADEMIC CHEMISTS
by PRINCIPAL EMPLOYER
1989 Survey of ACS Members

INSTITUTIONAL TYPE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
AA Degree	128	5	0	2	1	0	136
Row Percent	94.1%	3.7%	.0%	1.5%	.7%	.0%	100.0%
Column Percent	7.1%	11.6%	.0%	11.8%	11.1%	.0%	6.8%
BS Degree	415	11	1	5	2	0	434
Row Percent	95.6%	2.5%	.2%	1.2%	.5%	.0%	100.0%
Column Percent	23.2%	25.6%	.7%	29.4%	22.2%	.0%	21.7%
MS Degree	204	9	1	1	1	0	216
Row Percent	94.4%	4.2%	.5%	.5%	.5%	.0%	100.0%
Column Percent	11.4%	20.9%	.7%	5.9%	11.1%	.0%	10.8%
PhD Degree	925	17	126	7	3	1	1079
Row Percent	85.7%	1.6%	11.7%	.6%	.3%	.1%	100.0%
Column Percent	51.6%	39.5%	88.7%	41.2%	33.3%	100.0%	53.9%
Medical school	119	1	14	2	2	0	138
Row Percent	86.2%	.7%	10.1%	1.4%	1.4%	.0%	100.0%
Column Percent	6.6%	2.3%	9.9%	11.8%	22.2%	.0%	6.9%
Total	1791	43	142	17	9	1	2003
Row Percent	89.4%	2.1%	7.1%	.8%	.4%	.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.6.1

EMPLOYMENT STATUS OF NON-ACADEMIC CHEMISTS
by WORK FUNCTION
1989 Survey of ACS Members

WORK FUNCTION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
R&D Mgt	918	3	0	5	10	1	937
Row Percent	98.0%	.3%	.0%	.5%	1.1%	.1%	100.0%
Column Percent	14.7%	3.8%	.0%	7.2%	15.6%	25.0%	14.4%
Basic research	771	6	32	0	7	0	816
Row Percent	94.5%	.7%	3.9%	.0%	.9%	.0%	100.0%
Column Percent	12.3%	7.6%	78.0%	.0%	10.9%	.0%	12.5%
Applied research	2020	15	8	20	16	1	2080
Row Percent	97.1%	.7%	.4%	1.0%	.8%	.0%	100.0%
Column Percent	32.3%	19.0%	19.5%	29.0%	25.0%	25.0%	31.9%
General Mgt	551	7	0	9	6	1	574
Row Percent	96.0%	1.2%	.0%	1.6%	1.0%	.2%	100.0%
Column Percent	8.8%	8.9%	.0%	13.0%	9.4%	25.0%	8.8%
Marketing	358	3	0	4	1	1	367
Row Percent	97.5%	.8%	.0%	1.1%	.3%	.3%	100.0%
Column Percent	5.7%	3.8%	.0%	5.8%	1.6%	25.0%	5.6%
Production	535	5	0	10	7	0	557
Row Percent	96.1%	.9%	.0%	1.8%	1.3%	.0%	100.0%
Column Percent	8.6%	6.3%	.0%	14.5%	10.9%	.0%	8.6%
Forensics	284	2	0	3	1	0	290
Row Percent	97.9%	.7%	.0%	1.0%	.3%	.0%	100.0%
Column Percent	4.5%	2.5%	.0%	4.3%	1.6%	.0%	4.5%
Chem info services	107	10	0	2	4	0	123
Row Percent	87.0%	8.1%	.0%	1.6%	3.3%	.0%	100.0%
Column Percent	1.7%	12.7%	.0%	2.9%	6.3%	.0%	1.9%
Computers	47	1	0	2	0	0	50
Row Percent	94.0%	2.0%	.0%	4.0%	.0%	.0%	100.0%
Column Percent	.8%	1.3%	.0%	2.9%	.0%	.0%	.8%
Consulting	161	21	0	9	4	0	195
Row Percent	82.6%	10.8%	.0%	4.6%	2.1%	.0%	100.0%
Column Percent	2.6%	26.6%	.0%	13.0%	6.3%	.0%	3.0%
Other	288	3	1	3	5	0	300
Row Percent	96.0%	1.0%	.3%	1.0%	1.7%	.0%	100.0%
Column Percent	4.6%	3.8%	2.4%	4.3%	7.8%	.0%	4.6%

Table 8.6.1 Continued

WORK FUNCTION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
No Answer	216	3	0	2	3	0	224
Row Percent	96.4%	1.3%	.0%	.9%	1.3%	.0%	100.0%
Column Percent	3.5%	3.8%	.0%	2.9%	4.7%	.0%	3.4%
Total	6256	79	41	69	64	4	6513
Row Percent	96.1%	1.2%	.6%	1.1%	1.0%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.7.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by SPECIALTY
1989 Survey of ACS Members

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Biochemistry	454	3	49	3	2	2	513
Row Percent	88.5%	.6%	9.6%	.6%	.4%	.4%	100.0%
Column Percent	5.6%	2.3%	26.5%	3.4%	2.5%	28.6%	5.9%
Biotechnology	191	2	4	1	3	0	201
Row Percent	95.0%	1.0%	2.0%	.5%	1.5%	.0%	100.0%
Column Percent	2.3%	1.6%	2.2%	1.1%	3.8%	.0%	2.3%
General chemistry	422	15	0	2	5	0	444
Row Percent	95.0%	3.4%	.0%	.5%	1.1%	.0%	100.0%
Column Percent	5.2%	11.6%	.0%	2.3%	6.3%	.0%	5.1%
Agricultural chemistry	281	7	5	2	4	0	299
Row Percent	94.0%	2.3%	1.7%	.7%	1.3%	.0%	100.0%
Column Percent	3.4%	5.4%	2.7%	2.3%	5.0%	.0%	3.4%
Analytical chemistry	1581	15	13	14	12	1	1636
Row Percent	96.6%	.9%	.8%	.9%	.7%	.1%	100.0%
Column Percent	19.3%	11.6%	7.0%	16.1%	15.0%	14.3%	18.9%
Clinical chemistry	113	0	3	2	2	1	121
Row Percent	93.4%	.0%	2.5%	1.7%	1.7%	.8%	100.0%
Column Percent	1.4%	.0%	1.6%	2.3%	2.5%	14.3%	1.4%
Environmental chemistry	648	12	3	12	5	0	680
Row Percent	95.3%	1.8%	.4%	1.8%	.7%	.0%	100.0%
Column Percent	7.9%	9.3%	1.6%	13.8%	6.3%	.0%	7.8%
Inorganic chemistry	342	6	23	3	1	0	375
Row Percent	91.2%	1.6%	6.1%	.8%	.3%	.0%	100.0%
Column Percent	4.2%	4.7%	12.4%	3.4%	1.3%	.0%	4.3%
Materials science	377	17	3	6	5	0	408
Row Percent	92.4%	4.2%	.7%	1.5%	1.2%	.0%	100.0%
Column Percent	4.6%	13.2%	1.6%	6.9%	6.3%	.0%	4.7%
Medicinal-Pharmaceutical	459	2	13	1	5	0	[illegible]
Row Percent	95.6%	.4%	2.7%	.2%	1.0%	.0%	1[illegible]%
Column Percent	5.6%	1.6%	7.0%	1.1%	6.3%	.0%	[illegible]

Table 8.7.1 Continued

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Organic chemistry	1033	12	25	12	13	1	1096
Row Percent	94.3%	1.1%	2.3%	1.1%	1.2%	.1%	100.0%
Column Percent	12.6%	9.3%	13.5%	13.8%	16.3%	14.3%	12.6%
Physical chemistry	550	4	33	5	3	1	596
Row Percent	92.3%	.7%	5.5%	.8%	.5%	.2%	100.0%
Column Percent	6.7%	3.1%	17.8%	5.7%	3.8%	14.3%	6.9%
Polymer chemistry	858	12	6	8	8	0	892
Row Percent	96.2%	1.3%	.7%	.9%	.9%	.0%	100.0%
Column Percent	10.5%	9.3%	3.2%	9.2%	10.0%	.0%	10.3%
Other chemical science	278	5	2	4	5	0	294
Row Percent	94.6%	1.7%	.7%	1.4%	1.7%	.0%	100.0%
Column Percent	3.4%	3.9%	1.1%	4.6%	6.3%	.0%	3.4%
Business Administration	207	3	0	1	2	1	214
Row Percent	96.7%	1.4%	.0%	.5%	.9%	.5%	100.0%
Column Percent	2.5%	2.3%	.0%	1.1%	2.5%	14.3%	2.5%
Other non-chem'	386	14	3	11	5	0	419
Row Percent	92.1%	3.3%	.7%	2.6%	1.2%	.0%	100.0%
Column Percent	4.7%	10.9%	1.6%	12.6%	6.3%	.0%	4.8%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.8.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by GEOGRAPHIC REGION
1989 Survey of ACS Members

GEOGRAPHIC REGION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Pacific	982	26	45	6	4	0	1063
Row Percent	92.4%	2.4%	4.2%	.6%	.4%	.0%	100.0%
Column Percent	12.0%	20.2%	24.3%	6.9%	5.0%	.0%	12.3%
Mountain	340	3	13	5	2	1	364
Row Percent	93.4%	.8%	3.6%	1.4%	.5%	.3%	100.0%
Column Percent	4.2%	2.3%	7.0%	5.7%	2.5%	14.3%	4.2%
West North Central	484	5	11	2	2	0	504
Row Percent	96.0%	1.0%	2.2%	.4%	.4%	.0%	100.0%
Column Percent	5.9%	3.9%	5.9%	2.3%	2.5%	.0%	5.8%
West South Central	598	7	16	7	3	0	631
Row Percent	94.8%	1.1%	2.5%	1.1%	.5%	.0%	100.0%
Column Percent	7.3%	5.4%	8.6%	8.0%	3.8%	.0%	7.3%
East North Central	1679	22	32	18	19	0	1770
Row Percent	94.9%	1.2%	1.8%	1.0%	1.1%	.0%	100.0%
Column Percent	20.5%	17.1%	17.3%	20.7%	23.8%	.0%	20.4%
East South Central	280	1	4	1	3	0	289
Row Percent	96.9%	.3%	1.4%	.3%	1.0%	.0%	100.0%
Column Percent	3.4%	.8%	2.2%	1.1%	3.8%	.0%	3.3%
Middle Atlantic	1884	22	22	25	15	2	1970
Row Percent	95.6%	1.1%	1.1%	1.3%	.8%	.1%	100.0%
Column Percent	23.0%	17.1%	11.9%	28.7%	18.8%	28.6%	22.7%
South Atlantic	1310	23	27	7	11	0	1378
Row Percent	95.1%	1.7%	2.0%	.5%	.8%	.0%	100.0%
Column Percent	16.0%	17.8%	14.6%	8.0%	13.8%	.0%	15.9%
New England	544	14	11	4	8	0	581
Row Percent	93.6%	2.4%	1.9%	.7%	1.4%	.0%	100.0%
Column Percent	6.7%	10.9%	5.9%	4.6%	10.0%	.0%	6.7%
No Answer	79	6	4	12	13	4	118
Row Percent	66.9%	5.1%	3.4%	10.2%	11.0%	3.4%	100.0%
Column Percent	1.0%	4.7%	2.2%	13.8%	16.3%	57.1%	1.4%
Total	8180	129	185	87	80	7	8668
Row Percent	94.4%	1.5%	2.1%	1.0%	.9%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.1.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1989
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
BS	4	10	5	3	9	0	31
Row Percent	12.9%	32.3%	16.1%	9.7%	29.0%	.0%	100.0%
Column Percent	57.1%	41.7%	31.3%	23.1%	34.6%	.0%	35.6%
MS	2	4	5	1	3	1	16
Row Percent	12.5%	25.0%	31.3%	6.3%	18.8%	6.3%	100.0%
Column Percent	28.6%	16.7%	31.3%	7.7%	11.5%	100.0%	18.4%
PhD	1	10	6	8	14	0	39
Row Percent	2.6%	25.6%	15.4%	20.5%	35.9%	.0%	100.0%
Column Percent	14.3%	41.7%	37.5%	61.5%	53.8%	.0%	44.8%
No Answer	0	0	0	1	0	0	1
Row Percent	.0%	.0%	.0%	100.0%	.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	7.7%	.0%	.0%	1.1%
Total	7	24	16	13	26	1	87
Row Percent	8.0%	27.6%	18.4%	14.9%	29.9%	1.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.1.2

LENGTH OF UNEMPLOYMENT OF MEN CHEMISTS UNEMPLOYED on MARCH 1, 1989
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
BS	3	7	5	3	7	0	25
Row Percent	9.7%	22.6%	16.1%	9.7%	22.6%	.0%	80.6%
Column Percent	60.0%	38.9%	31.3%	30.0%	31.8%	.0%	34.7%
MS	1	3	5	0	3	1	13
Row Percent	6.3%	18.8%	31.3%	.0%	18.8%	6.3%	81.3%
Column Percent	20.0%	16.7%	31.3%	.0%	13.6%	100.0%	18.1%
PhD	1	8	6	7	12	0	34
Row Percent	2.6%	20.5%	15.4%	17.9%	30.8%	.0%	87.2%
Column Percent	20.0%	44.4%	37.5%	70.0%	54.5%	.0%	47.2%
Total	5	18	16	10	22	1	72
Row Percent	5.7%	20.7%	18.4%	11.5%	25.3%	1.1%	82.8%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.1.3

LENGTH OF UNEMPLOYMENT OF WOMEN CHEMISTS UNEMPLOYED on MARCH 1, 1989
by HIGHEST DEGREE
1989 Survey of ACS Members

HIGHEST DEGREE	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
BS	1	3	0	0	2	0	6
Row Percent	3.2%	9.7%	.0%	.0%	6.5%	.0%	19.4%
Column Percent	50.0%	50.0%	.0%	.0%	50.0%	.0%	40.0%
MS	1	1	0	1	0	0	3
Row Percent	6.3%	6.3%	.0%	6.3%	.0%	.0%	18.8%
Column Percent	50.0%	16.7%	.0%	33.3%	.0%	.0%	20.0%
PhD	0	2	0	1	2	0	5
Row Percent	.0%	5.1%	.0%	2.6%	5.1%	.0%	12.8%
Column Percent	.0%	33.3%	.0%	33.3%	50.0%	.0%	33.3%
No Answer	0	0	0	1	0	0	1
Row Percent	.0%	.0%	.0%	100.0%	.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	33.3%	.0%	.0%	6.7%
Total	2	6	0	3	4	0	15
Row Percent	2.3%	6.9%	.0%	3.4%	4.6%	.0%	17.2%
Column Percent	100.0%	100.0%	.0%	100.0%	100.0%	.0%	100.0%

Table 9.2.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1989
by AGE
1989 Survey of ACS Members

AGE	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
20-24	0	1	0	1	0	0	2
Row Percent	.0%	50.0%	.0%	50.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	.0%	7.7%	.0%	.0%	2.3%
25-29	0	1	0	1	0	0	2
Row Percent	.0%	50.0%	.0%	50.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	.0%	7.7%	.0%	.0%	2.3%
30-34	2	4	2	2	2	0	12
Row Percent	16.7%	33.3%	16.7%	16.7%	16.7%	.0%	100.0%
Column Percent	28.6%	16.7%	12.5%	15.4%	7.7%	.0%	13.8%
35-39	2	4	1	2	4	0	13
Row Percent	15.4%	30.8%	7.7%	15.4%	30.8%	.0%	100.0%
Column Percent	28.6%	16.7%	6.3%	15.4%	15.4%	.0%	14.9%
40-44	0	4	2	2	1	0	9
Row Percent	.0%	44.4%	22.2%	22.2%	11.1%	.0%	100.0%
Column Percent	.0%	16.7%	12.5%	15.4%	3.8%	.0%	10.3%
45-49	1	3	4	1	5	0	14
Row Percent	7.1%	21.4%	28.6%	7.1%	35.7%	.0%	100.0%
Column Percent	14.3%	12.5%	25.0%	7.7%	19.2%	.0%	16.1%
40-54	0	3	3	1	3	1	11
Row Percent	.0%	27.3%	27.3%	9.1%	27.3%	9.1%	100.0%
Column Percent	.0%	12.5%	18.8%	7.7%	11.5%	100.0%	12.6%
55-59	1	3	2	3	5	0	14
Row Percent	7.1%	21.4%	14.3%	21.4%	35.7%	.0%	100.0%
Column Percent	14.3%	12.5%	12.5%	23.1%	19.2%	.0%	16.1%
60-64	0	1	2	0	4	0	7
Row Percent	.0%	14.3%	28.6%	.0%	57.1%	.0%	100.0%
Column Percent	.0%	4.2%	12.5%	.0%	15.4%	.0%	8.0%
65-69	0	0	0	0	2	0	2
Row Percent	.0%	.0%	.0%	.0%	100.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	7.7%	.0%	2.3%

Table 9.2.1 Continued

AGE	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
No Answer	1	0	0	0	0	0	1
Row Percent	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	14.3%	.0%	.0%	.0%	.0%	.0%	1.1%
Total	7	24	16	13	26	1	87
Row Percent	8.0%	27.6%	18.4%	14.9%	29.9%	1.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.3.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1989
by WORK FUNCTION
1989 Survey of ACS Members

WORK FUNCTION	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
R&D Mgt	1	2	0	1	1	0	5
Row Percent	20.0%	40.0%	.0%	20.0%	20.0%	.0%	100.0%
Column Percent	16.7%	9.5%	.0%	16.7%	4.8%	.0%	7.2%
Applied research	3	6	2	3	6	0	20
Row Percent	15.0%	30.0%	10.0%	15.0%	30.0%	.0%	100.0%
Column Percent	50.0%	28.6%	14.3%	50.0%	28.6%	.0%	29.0%
General Mgt	1	4	2	0	2	0	9
Row Percent	11.1%	44.4%	22.2%	.0%	22.2%	.0%	100.0%
Column Percent	16.7%	19.0%	14.3%	.0%	9.5%	.0%	13.0%
Marketing	0	2	1	1	0	0	4
Row Percent	.0%	50.0%	25.0%	25.0%	.0%	.0%	100.0%
Column Percent	.0%	9.5%	7.1%	16.7%	.0%	.0%	5.8%
Production	0	3	5	0	2	0	10
Row Percent	.0%	30.0%	50.0%	.0%	20.0%	.0%	100.0%
Column Percent	.0%	14.3%	35.7%	.0%	9.5%	.0%	14.5%
Forensics	0	0	2	0	1	0	3
Row Percent	.0%	.0%	66.7%	.0%	33.3%	.0%	100.0%
Column Percent	.0%	.0%	14.3%	.0%	4.8%	.0%	4.3%
Chem info services	0	1	0	0	1	0	2
Row Percent	.0%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	4.8%	.0%	.0%	4.8%	.0%	2.9%
Computers	0	1	0	0	1	0	2
Row Percent	.0%	50.0%	.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	4.8%	.0%	.0%	4.8%	.0%	2.9%
Consulting	1	2	2	0	3	1	9
Row Percent	11.1%	22.2%	22.2%	.0%	33.3%	11.1%	100.0%
Column Percent	16.7%	9.5%	14.3%	.0%	14.3%	100.0%	13.0%
Other	0	0	0	1	2	0	3
Row Percent	.0%	.0%	.0%	33.3%	66.7%	.0%	100.0%
Column Percent	.0%	.0%	.0%	16.7%	9.5%	.0%	4.3%

Table 9.3.1 Continued

WORK FUNCTION	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
No Answer	0	0	0	0	2	0	2
Row Percent	.0%	.0%	.0%	.0%	100.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	9.5%	.0%	2.9%
Total	6	21	14	6	21	1	69
Row Percent	8.7%	30.4%	20.3%	8.7%	30.4%	1.4%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.4.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1989
by SPECIALTY
1989 Survey of ACS Members

WORK SPECIALTY	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
Biochemistry	0	2	0	0	1	0	3
Row Percent	.0%	66.7%	.0%	.0%	33.3%	.0%	100.0%
Column Percent	.0%	8.3%	.0%	.0%	3.8%	.0%	3.4%
Biotechnology	0	1	0	0	0	0	1
Row Percent	.0%	100.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	.0%	.0%	.0%	.0%	1.1%
General chemistry	0	0	0	0	2	0	2
Row Percent	.0%	.0%	.0%	.0%	100.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	7.7%	.0%	2.3%
Agricultural chemistry	0	1	1	0	0	0	2
Row Percent	.0%	50.0%	50.0%	.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	6.3%	.0%	.0%	.0%	2.3%
Analytical chemistry	2	2	3	2	5	0	14
Row Percent	14.3%	14.3%	21.4%	14.3%	35.7%	.0%	100.0%
Column Percent	28.6%	8.3%	18.8%	15.4%	19.2%	.0%	16.1%
Clinical chemistry	0	0	1	0	1	0	2
Row Percent	.0%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	.0%	6.3%	.0%	3.8%	.0%	2.3%
Environmental chemistry	1	5	1	2	3	0	12
Row Percent	8.3%	41.7%	8.3%	16.7%	25.0%	.0%	100.0%
Column Percent	14.3%	20.8%	6.3%	15.4%	11.5%	.0%	13.8%
Inorganic chemistry	0	2	0	1	0	0	3
Row Percent	.0%	66.7%	.0%	33.3%	.0%	.0%	100.0%
Column Percent	.0%	8.3%	.0%	7.7%	.0%	.0%	3.4%
Materials science	1	1	0	3	1	0	6
Row Percent	16.7%	16.7%	.0%	50.0%	16.7%	.0%	100.0%
Column Percent	14.3%	4.2%	.0%	23.1%	3.8%	.0%	6.9%
Medicinal-Pharmaceutical	0	0	0	1	0	0	1
Row Percent	.0%	.0%	.0%	100.0%	.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	7.7%	.0%	.0%	1.1%

Table 9.4.1 Continued

WORK SPECIALTY	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
Organic chemistry	1	2	3	3	3	0	12
Row Percent	8.3%	16.7%	25.0%	25.0%	25.0%	.0%	100.0%
Column Percent	14.3%	8.3%	18.8%	23.1%	11.5%	.0%	13.8%
Physical chemistry	0	1	3	0	1	0	5
Row Percent	.0%	20.0%	60.0%	.0%	20.0%	.0%	100.0%
Column Percent	.0%	4.2%	18.8%	.0%	3.8%	.0%	5.7%
Polymer chemistry	0	3	3	0	2	0	8
Row Percent	.0%	37.5%	37.5%	.0%	25.0%	.0%	100.0%
Column Percent	.0%	12.5%	18.8%	.0%	7.7%	.0%	9.2%
Other chemical science	1	1	0	0	2	0	4
Row Percent	25.0%	25.0%	.0%	.0%	50.0%	.0%	100.0%
Column Percent	14.3%	4.2%	.0%	.0%	7.7%	.0%	4.6%
Business Administration	0	0	0	0	1	0	1
Row Percent	.0%	.0%	.0%	.0%	100.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	3.8%	.0%	1.1%
Other non-chem	1	3	1	1	4	1	11
Row Percent	9.1%	27.3%	9.1%	9.1%	36.4%	9.1%	100.0%
Column Percent	14.3%	12.5%	6.3%	7.7%	15.4%	100.0%	12.6%
Total	7	24	16	13	26	1	87
Row Percent	8.0%	27.6%	18.4%	14.9%	29.9%	1.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.5.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1989
by GEOGRAPHIC REGION
1989 Survey of ACS Members

GEOGRAPHIC REGION	LENGTH OF UNEMPLOYMENT						Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	No Answer	
Pacific	0	3	2	1	0	0	6
Row Percent	.0%	50.0%	33.3%	16.7%	.0%	.0%	100.0%
Column Percent	.0%	12.5%	12.5%	7.7%	.0%	.0%	6.9%
Mountain	0	1	2	1	1	0	5
Row Percent	.0%	20.0%	40.0%	20.0%	20.0%	.0%	100.0%
Column Percent	.0%	4.2%	12.5%	7.7%	3.8%	.0%	5.7%
West North Central	0	1		0	0	0	2
Row Percent	.0%	50.0%	50.0%	.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	6.3%	.0%	.0%	.0%	2.3%
West South Central	2	1	1	1	2	0	7
Row Percent	28.6%	14.3%	14.3%	14.3%	28.6%	.0%	100.0%
Column Percent	28.6%	4.2%	6.3%	7.7%	7.7%	.0%	8.0%
East North Central	3	6	2	3	3	1	18
Row Percent	16.7%	33.3%	11.1%	16.7%	16.7%	5.6%	100.0%
Column Percent	42.9%	25.0%	12.5%	23.1%	11.5%	100.0%	20.7%
East South Central	0	1	0	0	0	0	1
Row Percent	.0%	100.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.0%	4.2%	.0%	.0%	.0%	.0%	1.1%
Middle Atlantic	0	9	3	3	10	0	25
Row Percent	.0%	36.0%	12.0%	12.0%	40.0%	.0%	100.0%
Column Percent	.0%	37.5%	18.8%	23.1%	38.5%	.0%	28.7%
South Atlantic	1	1	2	2	1	0	7
Row Percent	14.3%	14.3%	28.6%	28.6%	14.3%	.0%	100.0%
Column Percent	14.3%	4.2%	12.5%	15.4%	3.8%	.0%	8.0%
New England	0	0	2	0	2	0	4
Row Percent	.0%	.0%	50.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	.0%	12.5%	.0%	7.7%	.0%	4.6%
No Answer	1	1	1	2	7	0	12
Row Percent	8.3%	8.3%	8.3%	16.7%	58.3%	.0%	100.0%
Column Percent	14.3%	4.2%	6.3%	15.4%	26.9%	.0%	13.8%
Total	7	24	16	13	26	1	87
Row Percent	8.0%	27.6%	18.4%	14.9%	29.9%	1.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.1.1

ALL RESPONDENTS
by SEX and HIGHEST DEGREE
1989 Survey of ACS Members

SEX	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Men	1734	1455	4948	68	8205
Row Percent	21.1%	17.7%	60.3%	.8%	100.0%
Column Percent	73.2%	76.7%	88.8%	76.4%	82.7%
Women	627	434	601	21	1683
Row Percent	37.3%	25.8%	35.7%	1.2%	100.0%
Column Percent	26.5%	22.9%	10.8%	23.6%	17.0%
No Answer	9	9	21	0	39
Row Percent	23.1%	23.1%	53.8%	.0%	100.0%
Column Percent	.4%	.5%	.4%	.0%	.4%
Total	2370	1898	5570	89	9927
Row Percent	23.9%	19.1%	56.1%	.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.1

ALL RESPONDENTS
by AGE and HIGHEST DEGREE
1989 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
20-29	577	182	247	4	1010
Row Percent	57.1%	18.0%	24.5%	.4%	100.0%
Column Percent	24.3%	9.6%	4.4%	4.5%	10.2%
30-39	783	612	1692	19	3106
Row Percent	25.2%	19.7%	54.5%	.6%	100.0%
Column Pereent	33.0%	32.2%	30.4%	21.3%	31.3%
40-49	380	479	1761	30	2650
Row Percent	14.3%	18.1%	66.5%	1.1%	100.0%
Column Percent	16.0%	25.2%	31.6%	33.7%	26.7%
50-59	354	398	1276	22	2050
Row Percent	17.3%	19.4%	62.2%	1.1%	100.0%
Column Percent	14.9%	21.0%	22.9%	24.7%	20.7%
60-69	253	208	525	13	999
Row Percent	25.3%	20.8%	52.6%	1.3%	100.0%
Column Percent	10.7%	11.0%	9.4%	14.6%	10.1%
70 or more	1	1	0	0	2
Row Percent	50.0%	50.0%	.0%	.0%	100.0%
Column Percent	.0%	.1%	.0%	.0%	.0%
No Answer	22	18	69	1	110
Row Percent	20.0%	16.4%	62.7%	.9%	100.0%
Column Percent	.9%	.9%	1.2%	1.1%	1.1%
Total	2370	1898	5570	89	9927
Row Percent	23.9%	19.1%	56.1%	.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.2

MEN RESPONDENTS
by AGE and HIGHEST DEGREE
1989 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
20-29	315	96	192	1	604
Row Percent	52.2%	15.9%	31.8%	.2%	100.0%
Column Percent	18.2%	6.6%	3.9%	1.5%	7.4%
30-39	565	455	1410	14	2444
Row Percent	23.1%	18.6%	57.7%	.6%	100.0%
Column Percent	32.6%	31.3%	28.5%	20.6%	29.8%
40-49	295	373	1614	22	2304
Row Percent	12.8%	16.2%	70.1%	1.0%	100.0%
Column Percent	17.0%	25.6%	32.6%	32.4%	28.1%
50-59	316	341	1197	18	1872
Row Percent	16.9%	18.2%	63.9%	1.0%	100.0%
Column Percent	18.2%	23.4%	24.2%	26.5%	22.8%
60-69	230	180	488	12	910
Row Percent	25.3%	19.8%	53.6%	1.3%	100.0%
Column Percent	13.3%	12.4%	9.9%	17.6%	11.1%
70 or more	1	1	0	0	2
Row Percent	50.0%	50.0%	.0%	.0%	100.0%
Column Percent	.1%	.1%	.0%	.0%	.0%
No Answer	12	9	47	1	69
Row Percent	17.4%	13.0%	68.1%	1.4%	100.0%
Column Percent	.7%	.6%	.9%	1.5%	.8%
Total	1734	1455	4948	68	8205
Row Percent	21.1%	17.7%	60.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.3

WOMEN RESPONDENTS
by AGE and HIGHEST DEGREE
1989 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
20-29	262	86	54	3	405
Row Percent	64.7%	21.2%	13.3%	.7%	100.0%
Column Percent	41.8%	19.8%	9.0%	14.3%	24.1%
30-39	216	156	280	5	657
Row Percent	32.9%	23.7%	42.6%	.8%	100.0%
Column Percent	34.4%	35.9%	46.6%	23.8%	39.0%
40-49	85	104	145	8	342
Row Percent	24.9%	30.4%	42.4%	2.3%	100.0%
Column Percent	13.6%	24.0%	24.1%	38.1%	20.3%
50-59	38	57	78	4	177
Row Percent	21.5%	32.2%	44.1%	2.3%	100.0%
Column Percent	6.1%	13.1%	13.0%	19.0%	10.5%
60-69	22	28	36	1	87
Row Percent	25.3%	32.2%	41.4%	1.1%	100.0%
Column Percent	3.5%	6.5%	6.0%	4.8%	5.2%
No Answer	4	3	8	0	15
Row Percent	26.7%	20.0%	53.3%	.0%	100.0%
Column Percent	.6%	.7%	1.3%	.0%	.9%
Total	627	434	601	21	1683
Row Percent	37.3%	25.8%	35.7%	1.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.3.1

ALL RESPONDENTS
by WORK SPECIALTY and HIGHEST DEGREE
1989 Survey of ACS Members

SPECIALTY	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Chemical engineering	161	187	336	5	689
Row Percent	23.4%	27.1%	48.8%	.7%	100.0%
Column Percent	6.8%	9.9%	6.0%	5.6%	6.9%
Biochemistry	44	40	424	5	513
Row Percent	8.6%	7.8%	82.7%	1.0%	100.0%
Column Percent	1.9%	2.1%	7.6%	5.6%	5.2%
Biotechnology	21	35	144	1	201
Row Percent	10.4%	17.4%	71.6%	.5%	100.0%
Column Percent	.9%	1.8%	2.6%	1.1%	2.0%
General chemistry	118	146	174	6	444
Row Percent	26.6%	32.9%	39.2%	1.4%	100.0%
Column Percent	5.0%	7.7%	3.1%	6.7%	4.5%
Agricultural chemistry	77	47	171	4	299
Row Percent	25.8%	15.7%	57.2%	1.3%	100.0%
Column Percent	3.2%	2.5%	3.1%	4.5%	3.0%
Analytical chemistry	610	342	671	13	1636
Row Percent	37.3%	20.9%	41.0%	.8%	100.0%
Column Percent	25.7%	18.0%	12.0%	14.6%	16.5%
Clinical chemistry	21	23	76	1	121
Row Percent	17.4%	19.0%	62.8%	.8%	100.0%
Column Percent	.9%	1.2%	1.4%	1.1%	1.2%
Environmental chemistry	272	168	234	6	680
Row Percent	40.0%	24.7%	34.4%	.9%	100.0%
Column Percent	11.5%	8.9%	4.2%	6.7%	6.9%
Inorganic chemistry	42	25	303	5	375
Row Percent	11.2%	6.7%	80.8%	1.3%	100.0%
Column Percent	1.8%	1.3%	5.4%	5.6%	3.8%
Materials science	91	74	239	4	408
Row Percent	22.3%	18.1%	58.6%	1.0%	100.0%
Column Percent	3.8%	3.9%	4.3%	4.5%	4.1%

Table 10.3.1 Continued

SPECIALTY	HIGHEST DEGREE BS	MS	PhD	No Answer	Total
Medicinal/Pharma-ceutical	90	83	304	3	480
Row Percent	18.8%	17.3%	63.3%	.6%	100.0%
Column Percent	3.8%	4.4%	5.5%	3.4%	4.8%
Organic chemistry	170	132	789	5	1096
Row Percent	15.5%	12.0%	72.0%	.5%	100.0%
Column Percent	7.2%	7.0%	14.2%	5.6%	11.0%
Physical chemistry	33	45	517	1	596
Row Percent	5.5%	7.6%	86.7%	.2%	100.0%
Column Percent	1.4%	2.4%	9.3%	1.1%	6.0%
Polymer chemistry	219	141	525	7	892
Row Percent	24.6%	15.8%	58.9%	.8%	100.0%
Column Percent	9.2%	7.4%	9.4%	7.9%	9.0%
Other chemical science	72	79	140	3	294
Row Percent	24.5%	26.9%	47.6%	1.0%	100.0%
Column Percent	3.0%	4.2%	2.5%	3.4%	3.0%
Business Administration	69	114	139	5	327
Row Percent	21.1%	34.9%	42.5%	1.5%	100.0%
Column Percent	2.9%	6.0%	2.5%	5.6%	3.3%
Other non-chem	172	155	270	6	603
Row Percent	28.5%	25.7%	44.8%	1.0%	100.0%
Column Percent	7.3%	8.2%	4.8%	6.7%	6.1%
No Answer	88	62	114	9	273
Row Percent	32.2%	22.7%	41.8%	3.3%	100.0%
Column Percent	3.7%	3.3%	2.0%	10.1%	2.8%
Total	2370	1898	5570	89	9927
Row Percent	23.9%	19.1%	56.1%	.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.4.1

ALL RESPONDENTS
by RACE/ETHNICITY and HIGHEST DEGREE
1989 Survey of ACS Members

RACE/ETHNICITY	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
American Indian	17	7	24	0	48
Row Percent	35.4%	14.6%	50.0%	.0%	100.0%
Column Percent	.7%	.4%	.4%	.0%	.5%
Asian	67	104	407	3	581
Row Percent	11.5%	17.9%	70.1%	.5%	100.0%
Column Percent	2.8%	5.5%	7.3%	3.4%	5.9%
Black	40	22	50	1	113
Row Percent	35.4%	19.5%	44.2%	.9%	100.0%
Column Percent	1.7%	1.2%	.9%	1.1%	1.1%
White	2159	1706	4903	82	8850
Row Percent	24.4%	19.3%	55.4%	.9%	100.0%
Column Percent	91.1%	89.9%	88.0%	92.1%	89.2%
Hispanic	50	33	84	2	169
Row Percent	29.6%	19.5%	49.7%	1.2%	100.0%
Column Percent	2.1%	1.7%	1.5%	2.2%	1.7%
Other	18	12	29	1	60
Row Percent	30.0%	20.0%	48.3%	1.7%	100.0%
Column Percent	.8%	.6%	.5%	1.1%	.6%
No Answer	19	14	73	0	106
Row Percent	17.9%	13.2%	68.9%	.0%	100.0%
Column Percent	.8%	.7%	1.3%	.0%	1.1%
Total	2370	1898	5570	89	9927
Row Percent	23.9%	19.1%	56.1%	.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.5.1

ALL RESPONDENTS
by RACE/ETHNICITY and SEX
1989 Survey of ACS Members

RACE/ETHNICITY	SEX			Total
	Men	Women	No Answer	
American Indian	38	10	0	48
Row Percent	79.2%	20.8%	.0%	100.0%
Column Percent	.5%	.6%	.0%	.5%
Asian	473	106	2	581
Row Percent	81.4%	18.2%	.3%	100.0%
Column Percent	5.8%	6.3%	5.1%	5.9%
Black	86	27	0	113
Row Percent	76.1%	23.9%	.0%	100.0%
Column Percent	1.0%	1.6%	.0%	1.1%
White	7343	1497	10	8850
Row Percent	83.0%	16.9%	.1%	100.0%
Column Percent	89.5%	88.9%	25.6%	89.2%
Hispanic	142	27	0	169
Row Percent	84.0%	16.0%	.0%	100.0%
Column Percent	1.7%	1.6%	.0%	1.7%
Other	50	10	0	60
Row Percent	83.3%	16.7%	.0%	100.0%
Column Percent	.6%	.6%	.0%	.6%
No Answer	73	6	27	106
Row Percent	68.9%	5.7%	25.5%	100.0%
Column Percent	.9%	.4%	69.2%	1.1%
Total	8205	1683	39	9927
Row Percent	82.7%	17.0%	.4%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%

Table 10.6.1

ALL RESPONDENTS
by RACE/ETHNICITY and CITIZENSHIP
1989 Survey of ACS Members

RACE/ETHNICITY	CITIZENSHIP OR VISA STATUS					Total
	Native	Naturalized	Perm Res	Other visa	No Answer	
American Indian	46	1	1	0	0	48
Row Percent	95.8%	2.1%	2.1%	.0%	.0%	100.0%
Column Percent	.5%	.1%	.3%	.0%	.0%	.5%
Asian	103	284	149	45	0	581
Row Percent	17.7%	48.9%	25.6%	7.7%	.0%	100.0%
Column Percent	1.2%	36.3%	37.3%	51.1%	.0%	5.9%
Black	80	7	22	4	0	113
Row Percent	70.8%	6.2%	19.5%	3.5%	.0%	100.0%
Column Percent	.9%	.9%	5.5%	4.5%	.0%	1.1%
White	8184	414	202	33	17	8850
Row Percent	92.5%	4.7%	2.3%	.4%	.2%	100.0%
Column Percent	95.1%	52.9%	50.5%	37.5%	35.4%	89.2%
Hispanic	101	48	18	2	0	169
Row Percent	59.8%	28.4%	10.7%	1.2%	.0%	100.0%
Column Percent	1.2%	6.1%	4.5%	2.3%	.0%	1.7%
Other	30	18	7	4	1	60
Row Percent	50.0%	30.0%	11.7%	6.7%	1.7%	100.0%
Column Percent	.3%	2.3%	1.8%	4.5%	2.1%	.6%
No Answer	64	11	1	0	30	106
Row Percent	60.4%	10.4%	.9%	.0%	28.3%	100.0%
Column Percent	.7%	1.4%	.3%	.0%	62.5%	1.1%
Total	8608	783	400	88	48	9927
Row Percent	86.7%	7.9%	4.0%	.9%	.5%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.7.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and AGE
1989 Survey of ACS Members

GEOGRAPHIC REGION	AGE							
	20-29	30-39	40-49	50-59	60-69	70 or more	No Answer	Total
Pacific	116	409	310	235	132	0	13	1215
Row Percent	9.5%	33.7%	25.5%	19.3%	10.9%	.0%	1.1%	100.0
Column Percent	11.5%	13.2%	11.7%	11.5%	13.2%	.0%	11.8%	12.2
Mountain	36	131	127	82	29	0	4	409
Row Percent	8.8%	32.0%	31.1%	20.0%	7.1%	.0%	1.0%	100.0
Column Percent	3.6%	4.2%	4.8%	4.0%	2.9%	.0%	3.6%	4.1
West North Central	67	189	158	106	49	0	6	575
Row Percent	11.7%	32.9%	27.5%	18.4%	8.5%	.0%	1.0%	100.0
Column Percent	6.6%	6.1%	6.0%	5.2%	4.9%	.0%	5.5%	5.8
West South Central	58	214	241	157	71	0	7	748
Row Percent	7.8%	28.6%	32.2%	21.0%	9.5%	.0%	.9%	100.0
Column Percent	5.7%	6.9%	9.1%	7.7%	7.1%	.0%	6.4%	7.5
East North Central	247	649	518	384	169	0	24	1991
Row Percent	12.4%	32.6%	26.0%	19.3%	8.5%	.0%	1.2%	100.0
Column Percent	24.5%	20.9%	19.5%	18.7%	16.9%	.0%	21.8%	20.1
East South Central	29	106	100	74	36	0	5	350
Row Percent	8.3%	30.3%	28.6%	21.1%	10.3%	.0%	1.4%	100.0
Column Percent	2.9%	3.4%	3.8%	3.6%	3.6%	.0%	4.5%	3.5
Middle Atlantic	231	693	559	515	239	2	21	2260
Row Percent	10.2%	30.7%	24.7%	22.8%	10.6%	.1%	.9%	100.0
Column Percent	22.9%	22.3%	21.1%	25.1%	23.9%	100.0%	19.1%	22.8

Table 10.7.1 Continued

GEOGRAPHIC REGION	AGE							
	20-29	30-39	40-49	50-59	60-69	70 or more	No Answer	Total
South Atlantic	139	463	417	331	180	0	21	1551
Row Percent	9.0%	29.9%	26.9%	21.3%	11.6%	.0%	1.4%	100.0%
Column Percent	13.8%	14.9%	15.7%	16.1%	18.0%	.0%	19.1%	15.6%
New England	78	218	186	127	63	0	5	677
Row Percent	11.5%	32.2%	27.5%	18.8%	9.3%	.0%	.7%	100.0%
Column Percent	7.7%	7.0%	7.0%	6.2%	6.3%	.0%	4.5%	6.8%
No Answer	9	34	34	39	31	0	4	151
Row Percent	6.0%	22.5%	22.5%	25.8%	20.5%	.0%	2.6%	100.0%
Column Percent	.9%	1.1%	1.3%	1.9%	3.1%	.0%	3.6%	1.5%
Total	1010	3106	2650	2050	999	2	110	9927
Row Percent	10.2%	31.3%	26.7%	20.7%	10.1%	.0%	1.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.8.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and WORK FUNCTION
1989 Survey of ACS Members

WORK FUNCTION	GEOGRAPHIC REGION							GEOGRAPHIC REGION			Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
R&D Mgt	133	27	47	65	208	39	287	187	85	11	1089
Row Percent	12.2%	2.5%	4.3%	6.0%	19.1%	3.6%	26.4%	17.2%	7.8%	1.0%	100.0
Column Percent	10.9%	6.6%	8.2%	8.7%	10.4%	11.1%	12.7%	12.1%	12.6%	7.3%	11.0
Basic research	112	33	43	41	170	22	235	149	46	12	863
Row Percent	13.0%	3.8%	5.0%	4.8%	19.7%	2.5%	27.2%	17.3%	5.3%	1.4%	100.0
Column Percent	9.2%	8.1%	7.5%	5.5%	8.5%	6.3%	10.4%	9.6%	6.8%	7.9%	8.7
Applied research	260	85	140	170	539	53	607	327	158	22	2361
Row Percent	11.0%	3.6%	5.9%	7.2%	22.8%	2.2%	25.7%	13.9%	6.7%	.9%	100.0
Column Percent	21.4%	20.8%	24.3%	22.7%	27.1%	15.1%	26.9%	21.1%	23.3%	14.6%	23.8
General Mgt	114	32	43	67	111	29	132	130	46	16	720
Row Percent	15.8%	4.4%	6.0%	9.3%	15.4%	4.0%	18.3%	18.1%	6.4%	2.2%	100.0
Column Percent	9.4%	7.8%	7.5%	9.0%	5.6%	8.3%	5.8%	8.4%	6.8%	10.6%	7.3
Marketing	60	11	13	43	96	15	119	72	39	8	476
Row Percent	12.6%	2.3%	2.7%	9.0%	20.2%	3.2%	25.0%	15.1%	8.2%	1.7%	100.0
Column Percent	4.9%	2.7%	2.3%	5.7%	4.8%	4.3%	5.3%	4.6%	5.8%	5.3%	4.8
Production	61	30	32	69	136	33	135	94	39	7	636
Row Percent	9.6%	4.7%	5.0%	10.8%	21.4%	5.2%	21.2%	14.8%	6.1%	1.1%	100.0
Column Percent	5.0%	7.3%	5.6%	9.2%	6.8%	9.4%	6.0%	6.1%	5.8%	4.6%	6.4

Table 10.8.1 Continued

WORK FUNCTION	GEOGRAPHIC REGION							GEOGRAPHIC REGION			Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
Forensics	52	20	20	14	74	5	57	41	11	4	298
Row Percent	17.4%	6.7%	6.7%	4.7%	24.8%	1.7%	19.1%	13.8%	3.7%	1.3%	100.0
Column Percent	4.3%	4.9%	3.5%	1.9%	3.7%	1.4%	2.5%	2.6%	1.6%	2.6%	3.0
Chem info services	9	0	4	9	54	5	33	18	6	6	144
Row Percent	6.3%	.0%	2.8%	6.3%	37.5%	3.5%	22.9%	12.5%	4.2%	4.2%	100.0
Column Percent	.7%	.0%	.7%	1.2%	2.7%	1.4%	1.5%	1.2%	.9%	4.0%	1.5
Computers	7	4	5	3	10	1	23	15	8	0	76
Row Percent	9.2%	5.3%	6.6%	3.9%	13.2%	1.3%	30.3%	19.7%	10.5%	.0%	100.0
Column Percent	.6%	1.0%	.9%	.4%	.5%	.3%	1.0%	1.0%	1.2%	.0%	.8
Consulting	51	8	5	28	33	6	60	50	31	8	280
Row Percent	18.2%	2.9%	1.8%	10.0%	11.8%	2.1%	21.4%	17.9%	11.1%	2.9%	100.0
Column Percent	4.2%	2.0%	.9%	3.7%	1.7%	1.7%	2.7%	3.2%	4.6%	5.3%	2.8
Other	49	17	16	33	67	18	92	92	23	5	412
Row Percent	11.9%	4.1%	3.9%	8.0%	16.3%	4.4%	22.3%	22.3%	5.6%	1.2%	100.0
Column Percent	4.0%	4.2%	2.8%	4.4%	3.4%	5.1%	4.1%	5.9%	3.4%	3.3%	4.2
No Answer	307	142	207	206	493	124	480	376	185	52	2572
Row Percent	11.9%	5.5%	8.0%	8.0%	19.2%	4.8%	18.7%	14.6%	7.2%	2.0%	100.0
Column Percent	25.3%	34.7%	36.0%	27.5%	24.8%	35.4%	21.2%	24.2%	27.3%	34.4%	25.9
Total	1215	409	575	748	1991	350	2260	1551	677	151	9927
Row Percent	12.2%	4.1%	5.8%	7.5%	20.1%	3.5%	22.8%	15.6%	6.8%	1.5%	100.0
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0

Table 10.9.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and WORK SPECIALTY
1989 Survey of ACS Members

WORK SPECIALTY	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	South Atl	New England	No Answer	
Chemical eng	92	27	37	71	110	42	163	77	61	9	689
Row Percent	13.4%	3.9%	5.4%	10.3%	16.0%	6.1%	23.7%	11.2%	8.9%	1.3%	100.0
Column Percent	7.6%	6.6%	6.4%	9.5%	5.5%	12.0%	7.2%	5.0%	9.0%	6.0%	6.9
Biochemistry	68	20	42	41	103	22	98	76	36	7	513
Row Percent	13.3%	3.9%	8.2%	8.0%	20.1%	4.3%	19.1%	14.8%	7.0%	1.4%	100.0
Column Percent	5.6%	4.9%	7.3%	5.5%	5.2%	6.3%	4.3%	4.9%	5.3%	4.6%	5.2
Biotechnology	41	9	14	7	28	1	43	31	26	1	201
Row Percent	20.4%	4.5%	7.0%	3.5%	13.9%	.5%	21.4%	15.4%	12.9%	.5%	100.0
Column Percent	3.4%	2.2%	2.4%	.9%	1.4%	.3%	1.9%	2.0%	3.8%	.7%	2.0
General chemistry	47	16	35	34	97	16	87	63	39	10	444
Row Percent	10.6%	3.6%	7.9%	7.7%	21.8%	3.6%	19.6%	14.2%	8.8%	2.3%	100.0
Column Percent	3.9%	3.9%	6.1%	4.5%	4.9%	4.6%	3.8%	4.1%	5.8%	6.6%	4.5
Agricultural chem	43	6	33	19	53	9	55	67	9	5	299
Row Percent	14.4%	2.0%	11.0%	6.4%	17.7%	3.0%	18.4%	22.4%	3.0%	1.7%	100.0
Column Percent	3.5%	1.5%	5.7%	2.5%	2.7%	2.6%	2.4%	4.3%	1.3%	3.3%	3.0
Analytical chem	188	89	96	131	346	64	366	245	93	18	1636
Row Percent	11.5%	5.4%	5.9%	8.0%	21.1%	3.9%	22.4%	15.0%	5.7%	1.1%	100.0
Column Percent	15.5%	21.8%	16.7%	17.5%	17.4%	18.3%	16.2%	15.8%	13.7%	11.9%	16.5
Clinical chemistry	17	5	2	8	25	1	31	23	6	3	121
Row Percent	14.0%	4.1%	1.7%	6.6%	20.7%	.8%	25.6%	19.0%	5.0%	2.5%	100.0
Column Percent	1.4%	1.2%	.3%	1.1%	1.3%	.3%	1.4%	1.5%	.9%	2.0%	1.2
Environmental chem	117	42	32	56	120	28	111	119	44	11	680
Row Percent	17.2%	6.2%	4.7%	8.2%	17.6%	4.1%	16.3%	17.5%	6.5%	1.6%	100.0
Column Percent	9.6%	10.3%	5.6%	7.5%	6.0%	8.0%	4.9%	7.7%	6.5%	7.3%	6.9
Inorganic chem	43	24	23	37	76	13	76	58	20	5	375
Row Percent	11.5%	6.4%	6.1%	9.9%	20.3%	3.5%	20.3%	15.5%	5.3%	1.3%	100.0
Column Percent	3.5%	5.9%	4.0%	4.9%	3.8%	3.7%	3.4%	3.7%	3.0%	3.3%	3.8

Table 10.9.1 Continued

WORK SPECIALTY	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	South Atl	New England	No Answer	
Materials science	72	24	22	22	81	7	86	62	28	4	408
Row Percent	17.6%	5.9%	5.4%	5.4%	19.9%	1.7%	21.1%	15.2%	6.9%	1.0%	100.0
Column Percent	5.9%	5.9%	3.8%	2.9%	4.1%	2.0%	3.8%	4.0%	4.1%	2.6%	4.1
Med/pharm chem	40	7	25	15	108	8	179	62	32	4	480
Row Percent	8.3%	1.5%	5.2%	3.1%	22.5%	1.7%	37.3%	12.9%	6.7%	.8%	100.0
Column Percent	3.3%	1.7%	4.3%	2.0%	5.4%	2.3%	7.9%	4.0%	4.7%	2.6%	4.8
Organic chemistry	102	40	76	85	235	40	273	161	71	13	1096
Row Percent	9.3%	3.6%	6.9%	7.8%	21.4%	3.6%	24.9%	14.7%	6.5%	1.2%	100.0
Column Percent	8.4%	9.8%	13.2%	11.4%	11.8%	11.4%	12.1%	10.4%	10.5%	8.6%	11.0
Physical chemistry	109	35	33	43	95	21	127	87	40	6	596
Row Percent	18.3%	5.9%	5.5%	7.2%	15.9%	3.5%	21.3%	14.6%	6.7%	1.0%	100.0
Column Percent	9.0%	8.6%	5.7%	5.7%	4.8%	6.0%	5.6%	5.6%	5.9%	4.0%	6.0
Polymer chemistry	76	10	35	70	217	32	227	145	68	12	892
Row Percent	8.5%	1.1%	3.9%	7.8%	24.3%	3.6%	25.4%	16.3%	7.6%	1.3%	100.0
Column Percent	6.3%	2.4%	6.1%	9.4%	10.9%	9.1%	10.0%	9.3%	10.0%	7.9%	9.0
Other chem	36	16	9	20	66	8	67	55	12	5	294
Row Percent	12.2%	5.4%	3.1%	6.8%	22.4%	2.7%	22.8%	18.7%	4.1%	1.7%	100.0
Column Percent	3.0%	3.9%	1.6%	2.7%	3.3%	2.3%	3.0%	3.5%	1.8%	3.3%	3.0
Business admin	33	9	13	26	70	8	82	54	28	4	327
Row Percent	10.1%	2.8%	4.0%	8.0%	21.4%	2.4%	25.1%	16.5%	8.6%	1.2%	100.0
Column Percent	2.7%	2.2%	2.3%	3.5%	3.5%	2.3%	3.6%	3.5%	4.1%	2.6%	3.3
Other non-chem	65	21	28	39	102	21	138	129	47	13	603
Row Percent	10.8%	3.5%	4.6%	6.5%	16.9%	3.5%	22.9%	21.4%	7.8%	2.2%	100.0
Column Percent	5.3%	5.1%	4.9%	5.2%	5.1%	6.0%	6.1%	8.3%	6.9%	8.6%	6.1
No Answer	26	9	20	24	59	9	51	37	17	21	273
Row Percent	9.5%	3.3%	7.3%	8.8%	21.6%	3.3%	18.7%	13.6%	6.2%	7.7%	100.0
Column Percent	2.1%	2.2%	3.5%	3.2%	3.0%	2.6%	2.3%	2.4%	2.5%	13.9%	2.8
Total	1215	409	575	748	1991	350	2260	1551	677	151	9927
Row Percent	12.2%	4.1%	5.8%	7.5%	20.1%	3.5%	22.8%	15.6%	6.8%	1.5%	100.0
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0

Table 10.10.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and SEX
1989 Survey of ACS Members

GEOGRAPHIC REGION	SEX			Total
	Men	Women	No Answer	
Pacific	982	227	6	1215
Row Percent	80.8%	18.7%	.5%	100.0%
Column Percent	12.0%	13.5%	15.4%	12.2%
Mountain	345	63	1	409
Row Percent	84.4%	15.4%	.2%	100.0%
Column Percent	4.2%	3.7%	2.6%	4.1%
West North Central	484	90	1	575
Row Percent	84.2%	15.7%	.2%	100.0%
Column Percent	5.9%	5.3%	2.6%	5.8%
West South Central	637	110	1	748
Row Percent	85.2%	14.7%	.1%	100.0%
Column Percent	7.8%	6.5%	2.6%	7.5%
East North Central	1690	295	6	1991
Row Percent	84.9%	14.8%	.3%	100.0%
Column Percent	20.6%	17.5%	15.4%	20.1%
East South Central	298	50	2	350
Row Percent	85.1%	14.3%	.6%	100.0%
Column Percent	3.6%	3.0%	5.1%	3.5%
Middle Atlantic	1856	393	11	2260
Row Percent	82.1%	17.4%	.5%	100.0%
Column Percent	22.6%	23.4%	28.2%	22.8%
South Atlantic	1263	278	10	1551
Row Percent	81.4%	17.9%	.6%	100.0%
Column Percent	15.4%	16.5%	25.6%	15.6%
New England	528	149	0	677
Row Percent	78.0%	22.0%	.0%	100.0%
Column Percent	6.4%	8.9%	.0%	6.8%
No Answer	122	28	1	151
Row Percent	80.8%	18.5%	.7%	100.0%
Column Percent	1.5%	1.7%	2.6%	1.5%
Total	8205	1683	39	9927
Row Percent	82.7%	17.0%	.4%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%

Table 10.11.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and HIGHEST DEGREE
1989 Survey of ACS Members

GEOGRAPHIC REGION	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Pacific	271	233	695	16	1215
Row Percent	22.3%	19.2%	57.2%	1.3%	100.0%
Column Percent	11.4%	12.3%	12.5%	18.0%	12.2%
Mountain	85	68	249	7	409
Row Percent	20.8%	16.6%	60.9%	1.7%	100.0%
Column Percent	3.6%	3.6%	4.5%	7.9%	4.1%
West North Central	145	86	342	2	575
Row Percent	25.2%	15.0%	59.5%	.3%	100.0%
Column Percent	6.1%	4.5%	6.1%	2.2%	5.8%
West South Central	172	141	430	5	748
Row Percent	23.0%	18.9%	57.5%	.7%	100.0%
Column Percent	7.3%	7.4%	7.7%	5.6%	7.5%
East North Central	560	380	1031	20	1991
Row Percent	28.1%	19.1%	51.8%	1.0%	100.0%
Column Percent	23.6%	20.0%	18.5%	22.5%	20.1%
East South Central	80	70	200	0	350
Row Percent	22.9%	20.0%	57.1%	.0%	100.0%
Column Percent	3.4%	3.7%	3.6%	.0%	3.5%
Middle Atlantic	526	464	1255	15	2260
Row Percent	23.3%	20.5%	55.5%	.7%	100.0%
Column Percent	22.2%	24.4%	22.5%	16.9%	22.8%
South Atlantic	345	278	912	16	1551
Row Percent	22.2%	17.9%	58.8%	1.0%	100.0%
Column Percent	14.6%	14.6%	16.4%	18.0%	15.6%
New England	139	147	387	4	677
Row Percent	20.5%	21.7%	57.2%	.6%	100.0%
Column Percent	5.9%	7.7%	6.9%	4.5%	6.8%
No Answer	47	31	69	4	151
Row Percent	31.1%	20.5%	45.7%	2.6%	100.0%
Column Percent	2.0%	1.6%	1.2%	4.5%	1.5%
Total	2370	1898	5570	89	9927
Row Percent	23.9%	19.1%	56.1%	.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

American Chemical Society

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone (202) 872-4534

JOHN K CRUM
Executive Director

February 21, 1989

Dear Colleague:

Each year the American Chemical Society studies the economic status of the U.S. chemical profession by surveying a sample of ACS members. You are one of about 27,000 members I am asking to participate in this survey, conducted under the aegis of the Joint Board-Council Committee on Economic Status. This year, like last, the ACS will produce additional data on chemical engineers' salaries. The sample, therefore, includes more than the usual number of chemical engineers.

This year, the questionnaire contains a section related to professionalism. The results will address many of the issues raised in Gordon Nelson's recent conference on ACS Policies for Professionalism. Please use the space on the questionnaire for comments you may wish to make on this very important topic.

Your participation is an important service to your colleagues, because a high response rate is needed to assure accurate results. Please take a few minutes now to complete the questionnaire and return it in the enclosed business reply envelope. The information which you provide will be kept in strictest confidence and will be reported only as a part of aggregated data.

Findings will be reported to ACS members in several ways. Early in the summer, Chemical and Engineering News will publish a cover story on the salaries and employment status of chemists. At about the same time, the ACS will publish a detailed report entitled "Salaries 1989," which will be for sale through the ACS Distribution Office.

Please feel free to use the back of the questionnaire for whatever comments or suggestions you might care to make.

Thank you for your assistance.

Sincerely,

John K Crum

John K Crum

Encl.

1989 Comprehensive Salary and Employment Status Survey

PART I. EDUCATION AND EMPLOYMENT STATUS

1. PLEASE INDICATE THE YEAR IN WHICH YOU EARNED ANY OF THE FOLLOWING DEGREES:

Bachelor's	19__ __	1-2
Master's	19__ __	3-4
Doctorate	19__ __	5-6

2. PLEASE CHECK THE APPROPRIATE BOX IN EACH COLUMN.

	Field of highest degree	The ONE specialty most related to your current or most recent job	
Chemical engineering	☐01	☐01	
Biochemistry	☐02	☐02	
Biotechnology	☐03	☐03	
General chemistry	☐04	☐04	
Agricultural/food chemistry	☐05	☐05	
Analytical chemistry	☐06	☐06	
Clinical chemistry	☐07	☐07	
Environmental chemistry	☐08	☐08	
Inorganic chemistry	☐09	☐09	
Materials science	☐10	☐10	
Medicinal/pharmaceutical chemistry	☐11	☐11	
Organic chemistry	☐12	☐12	
Physical chemistry	☐13	☐13	
Polymer chemistry	☐14	☐14	
Other chemical science	☐15	☐15	
Business administration	☐16	☐16	
Other non-chemistry	☐17	☐17	7-10

3. PLEASE ENTER YOUR PRIMARY EMPLOYMENT STATUS AS OF MARCH 1, 1989. CHOOSE THE ONE CATEGORY THAT BEST FITS YOUR SITUATION.

Employed full-time (35 hours or more per week) ☐1
Employed part-time ☐2
Postdoctoral or other fellowship ☐3
Not employed but actively seeking employment ☐4
Not employed and NOT seeking employment ☐5 11

4. If you were NOT EMPLOYED BUT ACTIVELY SEEKING EMPLOYMENT on March 1, 1989, how long had you been unemployed?

Less than 1 month ☐1
1 to 3 months ☐2
4 to 6 months ☐3
7 to 12 months ☐4
More than 1 year ☐5 12

5. Regardless of your current status, was there any period when you were NOT EMPLOYED AND ACTIVELY SEEKING EMPLOYMENT in calendar year 1988?

Yes ☐1
No ☐2 13

IF YES, how many total weeks were you NOT EMPLOYED AND ACTIVELY SEEKING EMPLOYMENT during calendar year 1988?

__ __ weeks (ENTER A NUMBER FROM 1 TO 52) 14-15

6. If you are CURRENTLY EMPLOYED, how long have you worked for your current employer?

__ __ years __ __ months 16-19

7. What are the first three digits of the ZIP CODE of your current or most recent place of employment?

__ __ __ 20-22

IF YOU ARE NOT CURRENTLY EMPLOYED, PLEASE SKIP TO PART III, CURRENT OR MOST RECENT JOB.

PART II. CURRENT INCOME

1. BASE ANNUAL SALARY from PRINCIPAL JOB as of March 1, 1989. (DO NOT INCLUDE bonuses, earnings from second job, overtime work, summer teaching or other supplemental earnings.) If zero, please indicate. If on a 9 or 10 month contract, report the 9 or 10 month salary rather than an annualized salary.

$_____ ____ per year 23-29

2. TOTAL PROFESSIONAL INCOME during calendar year 1988. (INCLUDE consulting fees, base annual salary, bonuses, earnings from second job, overtime, summer teaching, and other supplemental earnings.)

$_____ per year 30-36

PART III. CURRENT OR MOST RECENT JOB

IF YOUR CURRENT OR MOST RECENT EMPLOYER IS *NOT* AN *ACADEMIC* INSTITUTION, GO TO SECTION B ON THE NEXT PAGE.

A. CURRENT OR MOST RECENT EMPLOYMENT *IS* IN AN *ACADEMIC* INSTITUTION.

1. Current (or most recent) principal employer:
College or university where the highest degree offered in chemistry or chemical engineering is:
Associate ☐1
Bachelor's ☐2
Master's ☐3
Doctorate ☐4
Medical or professional school ☐5
High school ☐6 37

2. Your employer is a:
Public institution ☐1
Private institution ☐2 38

3. Your academic rank:
Full professor ☐1
Associate professor ☐2
Assistant professor, tenure track ☐3
Instructor, lecturer, or non-tenure track ☐4
Non-teaching research associate ☐5
My institution does not have ranks ☐6 39

4. Have you been granted tenure?
Yes ☐1
No ☐2 40

5. Your basic contract is for a period of:
9 or 10 months ☐1
11 or 12 months ☐2 41

6. About what fraction of your total academic year assignment is devoted to:

Teaching	_____%	42-44
Research	_____%	45-47
Administration	_____%	48-50
Other	_____%	51-53
TOTAL	100.0%	

GO TO PART IV ON THE BACK PAGE

B. CURRENT OR MOST RECENT EMPLOYMENT IS *NOT* IN AN *ACADEMIC* INSTITUTION

1. Current (or most recent) principal employer:

- Self-employed ☐ 01
- Non-manufacturing ☐ 02
- Manufacturing
  - Basic chemicals ☐ 03
  - Specialty chemicals ☐ 04
  - Agricultural chemicals ☐ 05
  - Biochemical products ☐ 06
  - Coatings and paints ☐ 07
  - Electronics ☐ 08
  - Food ☐ 09
  - Glass, ceramics ☐ 10
  - Metals, minerals ☐ 11
  - Paper ☐ 12
  - Petroleum/natural gas ☐ 13
  - Pharmaceuticals, personal care ☐ 14
  - Plastics ☐ 15
  - Rubber ☐ 16
  - Soaps, detergents, surfactants ☐ 17
  - Other manufactures ☐ 18
- Government
  - Federal (civilian) ☐ 19
  - State or local ☐ 20
  - Military ☐ 21
- Other non-academic
  - Hospital, independent laboratory ☐ 22
  - Non-profit organization, other research institution ☐ 23
  - Other employment ☐ 24 54-55

2. Check the ONE work function that best describes your job.

- Research and Development
  - Management or administration of R&D ☐ 01
  - Basic research ☐ 02
  - Applied research, development, design ☐ 03
- General management, administration (other than research and development) ☐ 04
- Marketing, sales, purchasing, technical service, economic evaluation ☐ 05
- Production, quality control ☐ 06
- Forensic analysis, other laboratory analysis ☐ 07
- Chemistry information services ☐ 08
- Computer programming, analysis, design ☐ 09
- Consulting ☐ 10
- Other ☐ 11 56-57

3. Were you eligible for a bonus during calendar 1988?

- Yes ☐ 1
- No ☐ 2 58

4. Did you receive a bonus during calendar 1988?

- Yes ☐ 1
- No ☐ 2 59

5. IF YES, please indicate amount $ _____ 60-65

6. LEVEL OF RESPONSIBILITY: Please examine the statements within each of the four groups (Duties, Technical Decisions and Recommendations, Supervision Received, and Supervision Exercised) and, within each group, check the box of the statement that most closely corresponds to your responsibility on the job.

a. Duties:

- I receive on-the-job training working on simple projects or assisting more senior staff ☐ 1
- I perform responsible and varied assignments within projects ☐ 2
- I plan, conduct, and coordinate projects of some complexity ☐ 3
- I undertake long-term and short-term planning and supervision of projects. I make decisions on work programs and have budgetary control of projects ☐ 4
- I have full managerial responsibility for a function with full responsibility for the operation of a budget and long term planning ☐ 5 66

b. Technical Decisions and Recommendations:

- I am responsible for minor technical details only, all other matters being checked ☐ 1
- I am responsible for technical detail which is reviewed overall ☐ 2
- I am responsible for technical matters but am subject to occasional review ☐ 3
- I have full technical responsibility for projects ☐ 4
- I am responsible for all technical matters including the delegation of responsibility ☐ 5 67

c. Supervision Received:

- My work is assigned with detailed instructions, guidance being always available. My results are subject to close scrutiny ☐ 1
- My work is assigned in terms of detailed objectives and priorities, guidance being available on problems and unusual features. My work is subject to scrutiny ☐ 2
- My work is assigned in terms of general objectives and priorities, guidance being available on policy or unusually complex problems. My work is reviewed for effectiveness only ☐ 3
- My work is such that I receive executive instruction on broad overall objectives and it is reviewed only for its general effectiveness and adherence to policy ☐ 4
- My work is unsupervised, other than I comply with the policy decided within the governing body ☐ 5 68

d. Supervision Exercised:

- I have no authority but may give technical guidance to juniors working on the same project ☐ 1
- I have no managerial responsibilities for qualified staff but may be assigned graduates, technicians, or other juniors as assistants from time to time ☐ 2
- I supervise a group of qualified staff, technicians, and other employees. I assign and review their work. I can recommend on the selection, discipline, rating, training, and perhaps rate of pay ☐ 3
- I am responsible for leaders of groups containing qualified staff, technicians, and other employees. I give guidance on policy and complex technical matters delegating responsibility for discipline, rating, training, and rates of pay ☐ 4
- I have full control over senior staff who are in turn responsible for groups of qualified staff and other employees ☐ 5 69

PART IV. PROFESSIONAL INVENTORY:

The following questions are an attempt to measure certain aspects of what is commonly called "professionalism." The referent in the questions is your own profession. Each item then, should be answered in light of the way you yourself both feel and behave as a member of your particular profession.

There are five possible responses to each item. If the item corresponds VERY WELL (VW) to your own attitudes and/or behavior, circle that response. If it corresponds WELL (W), POORLY (P), or VERY POORLY (VP), mark the appropriate response. The middle category (?) is designed to indicate an essentially neutral opinion about the item. Please answer ALL items in one fashion or another, making sure that you have NO MORE THAN ONE RESPONSE FOR EACH ITEM.

	VW	W	?	P	VP	
1. I systematically read the professional journals.	1	2	3	4	5	70
2. Other professions are actually more vital to society than mine.	1	2	3	4	5	71
3. I make my own decisions in regard to what is to be done in my work.	1	2	3	4	5	72
4. I regularly attend professional meetings at the local level.	1	2	3	4	5	73
5. I think that my profession, more than any other, is essential for society.	1	2	3	4	5	74
6. My fellow professionals have a pretty good idea about each other's competence.	1	2	3	4	5	75
7. People in this profession have a real "calling" for their work.	1	2	3	4	5	76
8. The importance of my profession is sometimes over stressed.	1	2	3	4	5	77
9. The dedication of people in this field is most gratifying.	1	2	3	4	5	78
10. I don't have much opportunity to exercise my own judgment.	1	2	3	4	5	79
11. I believe that the professional organization(s) should be supported.	1	2	3	4	5	80
12. Some other occupations are actually more important to society than is mine.	1	2	3	4	5	81
13. A problem in this profession is that no one really knows what his colleagues are doing.	1	2	3	4	5	82
14. It is encouraging to see the high level of idealism that is maintained by people in this field.	1	2	3	4	5	83
15. The professional organization doesn't really do too much for the average member.	1	2	3	4	5	84
16. We really have no way of judging each other's competence.	1	2	3	4	5	85
17. Although I would like to, I really don't read the journals too often.	1	2	3	4	5	86
18. Most people would stay in the profession even if their incomes were reduced.	1	2	3	4	5	87
19. My own decisions are subject to review.	1	2	3	4	5	88
20. There is not much opportunity to judge how another person does his/her work.	1	2	3	4	5	89
21. I am my own boss in almost every work-related situation.	1	2	3	4	5	90
22. If ever an occupation is indispensable, it is this one.	1	2	3	4	5	91
23. My colleagues pretty well know how well we all do in our work.	1	2	3	4	5	92
24. There are very few people who don't really believe in their work.	1	2	3	4	5	93
25. Most of my decisions are reviewed by other people.	1	2	3	4	5	94

PART V. QUESTIONS ABOUT YOURSELF

1. Your sex:
Male ☐ 1 Female ☐ 2 95

2. Age at last birthday before March 1, 1989:
__ __ years old 96-97

3. Citizenship or visa status:
U.S. native ..... ☐ 1
U.S. naturalized ..... ☐ 2
U.S. permanent resident visa ..... ☐ 3
Other visa ..... ☐ 4 98

4. What is your racial background?
American Indian or Alaskan Native ..... ☐ 1
Asian or Pacific Islander ..... ☐ 2
Black ..... ☐ 3
White ..... ☐ 4
Other ..... ☐ 5 99

5. Are you of Spanish/Hispanic origin or descent?
Yes ..... ☐ 1
No ..... ☐ 2 100

Comments:

THANK YOU FOR YOUR PARTICIPATION

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